The Northern Light;

Devoted to Free Discussion, and to the Diffusion of Useful Knowledge, Miscellaneous Literature and General Intelligence.

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Political Science.

[For the Northern Light.]

OUGHT THE STATE TO IMMEDIATELY RESUME THE PROSECUTION OF THE PUBLIC WORKS?

BY P. H. AGAN.

THE writer is well aware, that in entering into the discussion of this subject, he is likely to meet with opposition; yet, conceiving that every man in this country is allowed to speak as well as to think his sentiments; and believing that he is bound so to do, on every question which concerns the welfare of his fellow-citizens, he proceeds to offer a few remarks upon the question laid down at the head of this article.

The great importance of this subject admonishes us to look at it in a spirit of sober and calm inquiry, without regarding in the least degree our own private feelings or sectional prejudices. The mass of the people—those who labor upon their farms, and who pay the taxes which support this internal improvement system—are the ones who have the most direct interest in the decision of this question. They are the men whose interests should be thought of when we decide this all important question. They should be asked how large a burthen can be borne before we put it upon their backs, for if we do not, they may be refractory and refuse to carry the load. We all have our own private interests interwoven into this subject. We all wish to see a "grand Erie canal" pass our doors, a turnpike with its toll-gate, or a railroad with a locomotive and cars going on it at the rate of twenty miles an hour. This gratifies our vanity, and perhaps in a few instances fills our pockets. But at the same time we forget the great mass of our neighbors who are delving the earth to obtain a bare livelihood, and are subject to taxation upon taxation for the support of their government. We heed not their entreaties or protestations, if we can but see some visible sign of "the advancing spirit of the age," in the shape of a huge work of internal improvement, which perhaps will never pay the first cent of its cost, and only remain a standing monument of legislative folly and corruption, and want of understanding on the part of those who were instrumental in bringing it into existence. Men are not mere automatons or pack-horses, ready to do the bidding of interested men; nor are they willing to have loads of debt piled upon their backs, until the increasing weight crushes them to earth never more to rise. Labor cannot always be taxed! One of these days it will turn around and ask of its masters, by what right, human or divine, do you this? And what will be the answer? Yes, what will be the answer! Already has it solemnly asked the question in the Old World, and unable to get an answer, has become uneasy—restless, and shows signs of revolt. Already have the political heavens of England been "hung with black," and it will require all the energies of her great statesmen and rules to save the ship of state in the coming storm. Great Britain has, by her unjust laws, taken from the mouth of labor the bread it has earned, and filled up the graneries of the aristocracy; and poor-houses, soup-houses, work-houses, crimes and prisons are the consequences. Are there any public soup-houses in America? Let New-York, Philadelphia, Boston and Albany answer the question.

The tendency of legislation on the subject of internal improvements has been to generate and foster a spirit of hostility between different portions of the State. One section is arrayed in hostility against another, where all should be peace, harmony and good will. The halls of the legislature are made the scene of combat between the rival forces of the different sections, and the battle rages perhaps session after session, until each has become surfeited with the strife and a compromise ensues. The north then modestly takes the south by the hand, and for the time being a system of log-rolling is commenced, whereby the people are made to suffer more severely than though the combatants were still wrangling and quarreling. By this cessation of arms, each section leads the other, and the people fall into the ditch. No one can imagine the injury that may be done by a coalition of different sections for the sake of getting a measure through the legislature or congress. It is difficult for an executive to stay the torrent of bribery and corruption which rule the hour, and darken the moral horizon around him. The system of local or internal improvement has consequently brought the law-making power into contempt, and destroyed that mutual confidence which has heretofore existed between the governing and the governed. It has filled the lobbies of the legislative hall with miserable mendicants, cringing sycophants, and fawning parasites, who annually hang around the "entrances and exits" to power, trembling with hope, fear and anxiety as the voices of the members reverberate through the hall, ushering into life, or sounding the death-knell of their darling projects. It has not only filled the lobbies of the legislature with these, but it has sent men to Albany as legislators who were neither virtuous nor honest, nor of good report, because their influence was supposed to be wanted to carry through some cherished measure for robbing the people of their rights and property. These are some of the effects of a system which has grown up, as it were, in a night, and which has involved the people in a debt of nearly $28,000,000; and towards the payment of the interest of which, they are compelled to pay a yearly tax of $650,000, a larger sum than is required to pay all the ordinary expenses of the six New-England States.

This enormous load of debt has been created within the last eight years. In a time of high excitement in the financial world, when men were getting enormously rich without labor or effort, when like Byron, they awoke in the morning to find themselves great; in short, when

> "Judgment had fled to brutish beasts,
> And men had lost their reason,'

the project of enlarging the Erie canal first took possession of the minds of the people along its line. Forthwith a loud shout was heard and echoed and re-echoed along its whole length from the Hudson to the Lakes, that the canal was not capacious enough to accommodate the growing trade of the country for any length of time, and must be immediately enlarged, or Canada and Pennsylvania would steal all the western trade in a few years. The whole western region about the great lakes was supposed to be filling up with people at a rate which would have put ancient Egypt herself to shame; and to read the accounts at the time, one would suppose that the entire body of the people were emigrating to the west, and that the entire eastern portion of the country would soon be left without an inhabitant. Petitions, therefore, poured into the legislature; the lobbies were thronged with a horde of greedy Vandals, and finally the house referred the subject to the canal commissioners for their opinion, &c. The commissioners reported that the enlargement would cost $13,000,000, but were very wary in their suggestions; and to their honor, recommended that the work should not be prosecuted faster than the surplus tolls would warrant. The legislature accordingly authorized the enlargement as recommended by the commissioners. A subsequent one, more in a hurry to fasten a debt upon the necks of the people than their predecessors, and believing that the great State of New-York was "losing rank and caste," authorized a still larger expenditure, and providing at the same time that the work should be completed in five years. The work has gone on until a larger sum has been expended than the original estimate of the cost of the whole. Still the canal is not more than half completed. Meantime other large expenditures have been authorized. Here and there a cool hundred thousand, and in one instance three millions have been thrown away to keep the outskirts of the State satisfied, until, as has been stated, the total debt has swelled up to nearly $28,000,000.

Under these circumstances, what is to be done? Shall the legislature authorize an immediate resumption of the public works? Shall the sound of the hammer and chisel again be heard along the line of the canal? or shall the "stop law" prevail and become the settled policy of the State?

I am not one among the number of those who believe that New-York, although the richest State in the Union, is capable of bearing any burthen which her law-makers may please to impose. There is a point at which she must halt. The income from her public works is limited, and taxation must also be limited to what her people can bear. It is only necessary to cast our eyes to the condition of our nearest neighbor, to see that a great State, with resources almost unbounded, can still involve herself in inextricable difficulties by one false move. It is necessary for us to look about very carefully when emerging from our "shell," to avoid being devoured like Pennsylvania and others of our sister States. Perhaps it is better, all things considered, to be enclosed within a shell, where we are secure from all attack, than to emerge, and run the risk of falling a pray to an inordinate love of vanity or ambition. Pennsylvania, in order to secure a greater share of the western trade than she was entitled to, has involved herself in a debt of forty millions, the interest of which is two millions per annum. Yet, with all her efforts, she has not been able to accomplish her object, and has only succeeded in involving her citizens in debt which can only be paid by such taxes as England has at times inflicted upon her citizens. The income of her public works, after paying the necessary expenses for repairs, &c., will only pay about one-third of the interest of their cost; and she has been continually borrowing to meet the demands upon the treasury. She attempted to shoot too far, and the recoil has prostrated her in the dust, and she now lies like a huge giant, manacled, and unable to rise. Her stocks are quoted in the public prints at fifty per cent discount; her creditors have been turned off with "scrip" for their hard earnings; her lands have sunk in value; her credit is gone; her citizens have become dispirited; and she stands a monument of legislative ignorance and folly. But Pennsylvania stands not alone in the catalogue: Maryland, Mississippi, Indiana and Illinois, are by her side. Each has striven with all its might to outdo the other in "developing its resources," and loss of credit, bankruptcy, repudiation and misery are the consequences.

With these lessons before us, is it possible that New-York will sink herself in the general whirlpool of folly and corruption? She stands already upon the very brink, and one more step would precipitate her down into the gulf. With an annual drain of a million and a quarter for interest, with a mill tax weighing down her energies, is it policy for her to continue to borrow money to finish works which now yield as much revenue as if they were completed? The Erie canal is sufficiently capacious to do three times the business which is now done upon it, and will not require enlarging in thirty years. Is it not

then folly to expend ten or fifteen millions to finish that work and others, at the present time? Many imagine that the mill tax is entirely unnecessary, and may with safety be repealed; and that no more taxes will be required to keep good the faith of the State. Let us see:

The total debt of the State was, on the 11th of January last—the date of the comptroller's report—$27,287,065.24; the annual interest of which amounted to $1,369,193.14. The last legislature also borrowed funds to meet present emergencies upon the treasury, the amount of which is not recollected; but the total debt of the State at the present time falls little short of $28,000,000. Of this sum $4,696,907.68 falls due within two years, or previously to July, 1845. What means have the State at its disposal to meet this debt and provide for the interest which will accrue on the whole debt of the State previously to that time?

The liabilities of the State on the 1st July, 1845, admitting that no payments should be made before that day, will be as follows:

Principal,.....	$4,696,907 68
Interest on the whole debt of the State, expenses of the State government and repairs of canals,..	5,000,000 00
Total liabilities 1st July, 1845,...	$9,696,907 68

RESOURCES.

Available means on hand,.....	$1,407,666 45
Mill tax, three years,.....	1,950,000 00
Canal tolls to 1st July, 1845, say,..	4,500,000 00
Total resources, ...	$7,857,666 45
Excess of liabilities over resources, 1st July, 1845,.....	$1,839,241 23

This statement, it is believed, approximates very near to the truth, and it exhibits a truly melancholy picture of the condition of our State finances. Instead of a tax of one mill, it will require that it be doubled in order to meet punctually the liabilities of the State due in 1845, and preserve its credit inviolate. What then is to be done? Are the public creditors to go unpaid until the surplus revenues of the canals are sufficient to redeem the bonds? Is another tax to be levied? Or are we to meet our liabilities with new loans! The first must not be. New-York must never disgrace herself by failing to meet her solemn engagements. She has been already sufficiently dishonored by having her stocks hawked about on 'change at 20 per cent discount. The second, her people cannot very well bear, and the third will probably be the mode adopted by the legislature. But there are payments falling due every year for the twenty years succeeding 1845, for which means will have to be provided. The total amount of these debts and the interest, including nearly two millions not provided for, which falls due in 1845, will reach an aggregate of at least $38,000,000. This immense burthen of debt will fall due and will have to be paid previously to the year 1866. Let us now see how the account current of the State will stand at that time, allowing it to receive on an average $2,400,000, a year for tolls and other resources, which is probably a fair estimate:

Debt and interest,.....	$38,000,000 00
Support of canals, $650,000 per annum, ...	13,000,000 00
Support of government $700,000,..	14,000,000 00
Total expenditures,.....	$65,000,000 00
Deduct tolls and other resources. 20 years,.....	48,000,000 00
Debt remaining unpaid in 1866,...	$17,000,000 00

Thus it appears upon what is supposed to be a fair estimate, that the State will, at the close of 1865, the year in which the last bonds become due, be still in debt seventeen millions of dollars. More than one-half of the present debt will then remain unpaid, unless measures are taken whereby it may be cancelled. If the bonds run for forty instead of twenty years, the State might, perhaps, pay them when due; but unless another mill tax is imposed, the debt will not, nor cannot, be canceled before the year 1885. Will, then, any one venture to contend that the present tax law is unnecessary, and call for its repeal? It is well known that this law expires in 1845. The State will then be thrown upon her own resources. What they are, and what her liabilities, we have already seen. It plainly appears, then, that if the people wish to preserve the credit of their government, they will be under the necessity of instructing the legislature to re-enact this law, and continue it in force until the whole of the present debt is paid; and that they must contribute from their own pockets, the enormous sum of $17,000,000 in the shape of direct taxes. Thirty years of the mill tax, with all of our other resources combined, will scarcely cancel the debt already existing. But what would be our condition were we to go on and complete the Erie, Genesee Valley and Black River canals? To finish these works would add to the present debt fifteen millions of dollars, and the annual interest $700,000. Adding fifteen millions to the present debt, and the aggregate would then be over forty millions. What could even the great State of New-York do with an annual drain from her treasury of two millions to pay interest? Will it be believed that the Erie canal and the auction and salt duties will produce a surplus of two millions after paying the expenses of the canals and the State government? But even admitting that the canals would yield a surplus of two millions, how would the debt be canceled? How would the forty millions of principal be paid? It would require a three mill tax for twenty years. Are the people of this State prepared for this? Are they willing to be taxed two millions per annum for the ensuing twenty years, to enable the State to finish works which would be entirely and forever unproductive? It is already seen, that the State, in order to pay her present enormous debt as fast as it becomes due, and thereby preserve her faith with her creditors, must add nearly $400,000 annually to the present income of the mill tax.

The question now is, not whether the public works shall be completed, but how shall the means be obtained to pay for work already done. When these means are forthcoming without a resort to direct taxation, it will be time to talk of finishing our public works. Shall we yield to the voice of a few interested sections, and go onward in our hitherto reckless course, exhaust our energies, destroy our credit, and sink the State another degree lower in bankruptcy; or shall we pursue the course marked out by prudence, good judgment and discretion, and thereby preserve our faith and credit unimpaired? The course which leads to honor or dishonor is plain, and "the wayfaring man, though a fool, need not err therein."

Liverpool, August 29, 1843.

[For the Northern Light.]

THE NORTHERN LIGHT AND THE TARIFF QUESTION.

BY J. PATTERSON.

Having been for the last eighteen months a subscriber for the "Northern Light," deriving during the time both information and amusement from the discussions that have been conducted through its columns—and yet confessing myself unable to see what end has been attained by them, I have ventured to submit this paper. The suggestions it presents will sufficiently explain its purpose.

In its successful progress since its introduction to the public, the "Northern Light" has worthily fulfilled the promise with which it began. It has been an organ of "general intelligence" and "free discussion." It has exhibited through its columns the fruits of some of the most substantial talent in the country. So entirely neutral has been its political complexion, that throughout its life as a public journal, its columns have discussed but one of the many great questions that mingle largely in American interests; that have been the objects of differences in individual opinion, and that bid fair to become in future, the subjects of partisan contention. Apart from its merits as a literary journal, this political neutrality—its characteristic feature—is, indeed, its best recommendation. It secures, as its experience has proved, free discussion—its principal and leading object, instead of the bitter animadversion that partisan journals have so liberally lavished to their own reproach, and the prostitution of political rectitude. Mild, however, and instructive as has been the free discussion so generously invited, it might be well, now that another volume of this journal is in progress, to enquire to what result has that discussion guided us? What practical truths has it elucidated, relating to a question involving, as the tariff does, so much of the nation's internal peace, and so many, and such varied interests of the citizen? And lastly, what policy it would now recommend as the true and the expedient to the councils of the nation soon again to assemble?

The merits of a trade entirely free, and those of a revenue and protective tariff, have been ably and minutely argued by their respective champions. Many of the general principles which this great question involves, and many arising collaterally from it, have been debated with a zeal, and learning, and ingenuity that have justly claimed from the reading public, admiration and respect for both essay and author. Nor would I be understood as having fault to find with aught that has been given to the public. On the contrary, I have been, by its perusal, instructed and entertained. My complaint reaches rather to what has not been written, than to anything that has been published. I deem it a subject of regret, that amongst all the varied talent that has presented itself in your journal upon this question, no pen has yet been found that would depart for a moment from abstract argument, and lay before your readers and the nation the outline of such a tariff as would satisfy the various branches of industry most interested in the question, and be the means of introducing some settled system upon which the government and the people could fix as a permanent and unalterable policy. Is there not some one among the many intellects that have made this subject a study, who can propose and honestly recommend some system that shall act as a fair adjustment of the differences now existing in the opinions of men on a subject involving so many of their individual interests, and so much of their private peace? Cannot something tangible be reached? something that shall satisfy the manufacturer and encourage him, while it shall not oppress or injure the consumer?

For the encouragement of private industry; for the nation's internal peace; for her redemption from the recent miseries we have suffered in our business relations; for every consideration, it is time that an amicable adjustment of this question was effected. None other than an amicable one can be effectual. Placed upon the basis of partisan opinion, it must rise and fall with partisan ascendancy. Such an adjustment, too, is what the country wants; what a thousand voices from a thousand suffering interests earnestly demand—and this paper is respectfully submitted in the hope that the few suggestions it contains may elicit something practicable and explicit from the array of commercial genius and financial talent, that have been so long engaged in the discussion of the tariff question.

The "free discussion" so frankly invited in your journal, upon this, as upon every subject, in order to be profitable, should not only tend toward, but absolutely reach some practicable good; and abstract reasonings upon any point, are seldom worth the time devoted to them, unless they arrive at some fixed principle or available conclusion. As mere abstractions, they bear to "things useful" something of the same relation that the laws of Solon and Lycurgus or the Pandects of Justinian and the decretals of Gregory do to modern jurisprudence. As the latter are curious for their antiquity, remarkable for their equity, and frequently of admirable use in illustrating a point of history, so the former are curious for their ingenuity, remarkable, perhaps, for the mental discernment they display, and frequently of admirable use in an argument.

Ably, therefore, as the tariff discussion in the "Northern Light" has been maintained, we look in vain for the practical results it should, ere this, have found. Upon how many minds, amidst the living mass, has that discussion left an impression as to what the tariff ought to be, or what policy the government ought to adopt in reference to this widely agitated question? Whose convictions has it settled, except perhaps the convictions of the writers? What practical truths has it strongly forced upon the attention of the national mind, which, if brought into action, will effect an equitable and permanent adjustment of this, the most intricate and difficult branch of national policy? We ask in vain. No point has then been attained, no available principle definitely settled.

It is agreed upon all hands, that a revenue tariff is necessary to the maintainance of the government. No advocate of free trade will hardly be found so ultra as to maintain a resort to direct taxation, in preference to any restriction upon our commercial intercourse. Here, then, we have a standard, a revenue tariff adapted to a purely necessary and economical expenditure in the administration of government. The only question remaining to be decided, is, how shall that revenue tariff be modified so as to afford to our domestic manufactures a living and encouraging protection, without infringing upon the natural liberty or the profits of other national interests? In other words, how satisfy the manufacturer without trespassing upon the civil rights of other classes of citizens?

Out of all the talent that has made a study of this great subject, may we not expect so beneficial and so desirable a compromise? From all the intellectual power and treasured information which have written so much and debated so ably, have not the country and its humblest citizen a right to look for an attempt at such adjustment? I would have that talent and that intellectual power, and that political information, combined and united. I would have the advocate of free trade and the champion of exclusive protection, lay aside their personal prejudices, private animosities and peculiar doctrines; and I would have their mingled energies united, strength-

ened, each conceding something to the other; and, freed from the trammels of partisan pride and private opinion, I would have them devoted, with the enthusiasm of a patriotic heart, and the enlightened strength of a determined intellect, to a final and permanent adjustment of this question; momentous in itself, in its intricacy as a branch of political science, and important as one of the political issues of the country, to that country's present interest; important perhaps to her future tranquillity.

It has been too long a bone of political contention: it has been too long the "apple of discord" to statesman and citizen: it has embittered too many hearts, and inflamed too many minds: it has clamored too long and too loudly in the halls of our public councils: it has deranged too often the business and industry of the country: it has retarded too long the nation in her "march of fate," and it is to be hoped that a spirit of compromise will hereafter guide the efforts of those who approach this question, and speedily lead them to an equitable settlement—a sure, a permanent, and I may add, the only enduring foundation that can afford stability to the great and growing fabric of American industry: give internal peace to the union, and harmonize her conflicting interests.

In the humble hope that these suggestions may be the means of bringing out something from "distinguished sources," this paper is submitted. The work proposed is one worthy of patriotic effort, and whoever has the ability or power to effect it, need ask of history and fate no better fame than to be the instrument of its accomplishment. To place a question so vast and wide in its relations—and so long the subject of uncertainty and strife, upon a sure, satisfactory and enduring basis, will bring more lasting honors to the successful mind, than warlike arm can win or wear. One such civic wreath is worth a crown of martial laurel—and to him who shall become the fortunate instrument in quenching this firebrand of party feud, I should deem the adjustment of a question so nationally important, a better and far holier fame than "to sleep beneath the marble of the Cæsars."

Freehold, Sept. 16th, 1843.

Agriculture.

[For the Northern Light.]

WORK FOR THE MONTH OF OCTOBER.

BY C. N. BEMENT.

This is a very important month to the agriculturist, and it should be the object of each to perform all the duties required of him at the earliest possible period in the month. "Delays are dangerous," is an old and trite saying, and to none will it apply with more force than those engaged in cultivating the soil, for by delaying the performance of things which should be done at the time till a remote period, we not only often lose a season, but frequently hazard our very success. We have been so strongly impressed with the truth of the above, that we have often thought that it would be to our interest to have painted in some couspicuous place, in large capitals—DO ALL THINGS IN SEASON,—as it would serve to remind us of the value and importance of time. "Time is money," said Doct. Franklin, and he certainly must have had the farmer in view when he penned it; for there is no class to which it would apply with more force. Besides the moral it inculcates, it would impress upon our minds how essential it is to prosperity to follow its wholesome advice.

This month will be occupied with the securing of crops, and it is important for their preservation that this be done in the best manner; we have reference especially to root crops, which should be placed beyond the danger of injury. As soon as the vines of the potatoes wither, harvest the roots, and be sure when you have got them out of the ground to put them away for winter with as little exposure to the weather as possible. Exposure to the sun not only injures their quality but renders them more liable to decay.

Potatoes should be packed away in such a manner as to secure them from frost and moisture—and while putting them away be sure that it is done well, as it is better to take some additional pains, than to loose one-half the amount by carelessness.

It has been recommended by some, and Judge Buel among the number, to let all the soil adhere to them that will, and to put into the cask or bin dry sand, and to cover the top with turf to exclude the air.

We frequently hear housekeepers complain, that their potatoes, turnips, and other vegetables soon deteriorate and lose their fine flavor, after they have been a short time in their cellar. This is a natural consequence of the injudicious way in which they are too frequently kept—exposed to the atmosphere, and to a high temperature, in a cellar adjoining the kitchen, or perhaps in the kitchen itself. Again, potatoes or turneps, buried in a wet condition, or the latter with part of their tops left on, are very liable to ferment and spoil.

Mangel-wurzel and carrots should be taken up the latter part of this month, as they are more easily injured by frost than ruta bagas, and should consequently be sooner secured; they will keep well in dry cellars, which will admit of some circulation of air, or out of doors in well covered pits, if made upon earth that will not retain water. Sugar beets should be harvested before they get too ripe, as it has been ascertained by chemical tests, that much of the saccharine is displaced by nitre, and to which cause the writer ascribes the death of his bull, Astoria, last fall.

Harvesting corn.—Experience and science concur in disapprobating the common practice of topping corn. Experiments have been made by careful and intelligent farmers, which show that it diminishes the crop; and the principles of science corroborate their report. The corn is nourished by the sap elaborated by the leaves *above* the ears, and when these elaboratic organs are taken away, the supply of food must cease in whole or in part. If fodder is the object, it is far better to cut the whole crop at the ground when the corn is glazed, or hard upon the surface—while the leaves and stalks are generally yet green and succulent, and to set it immediately in stooks, containing from 80 to 90 stalks, and tie above the ears, which latter keep it sufficiently open to prevent the grain from heating or moulding. This mode has two other recommendations; it clears the ground for fall grain, and the corn derives nourishment from the stalk after it is cut. Being gathered in this succulent state, and protected in the stook from the injurious effect of the weather, it dries moderately and retains most of its saccharine and nutricient matter. The corn may be picked from the stalk in twelve or fifteen days, if the weather is favorable, though the stalks require a longer time to cure, before they are housed. When the corn is taken off we put the stalks into small stacks, so as to expose all the butt ends which have become wet by standing in the fields, to the drying influence of the winds. The grain unquestionably derives more benefit from the stalk after it is cut up, than it does from the stalk, after the latter has been stripped of its leaves, its elaborating organs, as practiced at the south. It should be remembered, however, that our corn-stalks are small in comparison to those grown in the south or western states.

Selecting corn for seed.—It is highly important that the seed corn should be selected from the best samples which can be obtained. The reason why this practice is recommended is this; the offspring of vegetables as well as animals will, in a great measure, partake of the good or bad qualities of the parent.

The following directions on this subject are from the pen of Joseph Cooper, Esqr. a very successful farmer of New-Jersey.

"When the first ears are ripe enough for seed, gather a sufficient quantity for early corn, or replanting; and at the time you would wish your corn to be ripe generally, gather a sufficient quantity for planting the next year, having a particular care to take it from the stalks which are large at bottom, of a regular taper, not over tall, the ears set low and containing the greatest number of good sizeable ears of the best quality; let it dry speedily; and from the corn gathered as last described plant your main crop, and if any hills should be missing, replant from that which was first gathered, which will cause the crops to ripen more regularly than common, which is a great benefit."

Thomas L. Baden of Maryland, succeeded in bringing corn to great perfection by the following method. He selected the best ears for seed in the field for a long course of years, having especial reference to those stalks that produced the most ears. When the corn was husked, he then made a re-selection, taking only that which appeared sound and fully ripe, having regard to the deepest and best colors as well as the size of the ear. In the spring before shelling the corn he examined it again, and selected that which was best in all respects. In shelling the corn, he omitted to take the small and irregular kernels at both ends of the ear. By carefully adhering to this practice for a succession of years, he succeeded in obtaining from four to six ears from a stalk.

Some recommend marking the ears and letting them remain on the stalk until they become sapless. But whichever method is adopted, when they are taken in, they should be hung up by the husks in a dry place, secure from early frost, and they will soon be hardened so as to be in no danger from the frost in winter.

Corn husks for beds.—As soon as the husks of corn are fully ripe, they should be gathered when they are dry in a clear air. The outer hard husks are to be rejected, and the softer inner ones to be fully dried in the shade. Cut off the hard end formerly attached to the cob, and draw the husk through a hatchel or suitably divide it with a coarse comb. The article is then fit for use, and may be put into a tick as straw commonly is, or be formed into a matrass as prepared hair is. The material is sweet, pleasant and durable.

Manure.—Omit no exertion within your reach or power to increase the quantity of your manure. Recollect that as that lies at the foundation of good husbandry, so it is the handmaid by which the farmer acquires competency or wealth. In clearing out the ditches, remove that which is thrown out to the barn-yard, pig-stye, or compost heap. Collect all the weeds growing around your fences and by-corners—do not suffer them to go to seed, but add them to the compost heap. If you have any muck, haul it out and line your cattle yard with it; you will find your time well spent.

Pumpkins.—Carefully gather and stow away all of this valuable vegetable you have grown—and here let us advise you—feed none to your hogs without cooking them.

Fences.—As the season has arrived when the pastures are generally scantily supplied with grass, look well to the fence of your corn-fields. Examine every pannel with a scrutinizing eye, and whenever repairs are necessary make them promptly, or when you least expect it, your own or your neighbors' cattle may, availing themselves of weak points, break in and destroy much of your crop.

Ditching.—If you have any new ditches to be excavated or old ones to be cleaned out, go to work forthwith, and have your work done while the season is favorable to such operations.

Orchards.—If you design planting out a young orchard this fall, the sooner you plow up the ground you allot for it the better. Let it lie undisturbed until you are ready to set out your trees, then plow again, taking care to go as deep each time as your team will let you. If the means be in your power, sub-soil-plowing should be resorted to the second time, as nothing contributes more to encourage the growth of young trees, than a fine open soil to receive the lateral roots, as they may be formed. Upon the subject of setting out orchards, we would remark, that in our opinion no one should attempt it without giving his soil a dressing of lime or ashes. When trees are removed for the purpose of being transplanted, their roots should, if possible, be fresh and entire. October and November, and immediately after the first hard frosts have arrested vegetation, is esteemed the best season of all for transplanting trees. When trees are transplanted in Autumn, the earth becomes duly consolidated at their roots, and they are ready to vegetate with the first advancement of spring.

Turneps.—By hoeing your turneps early this month, and stirring the soil thoroughly, it will promote their growth greatly.

Cows.—As the pastures get short of food, be careful to provide something for your milch cows to eat, that they may not suffer for food. If you have provided a patch of corn sown broadcast or millet, now is the time to feed it, for you may rest assured there is nothing like having them in good condition at the commencement of winter. It should be the pride of every farmer to provide a sufficient stock of pumpkins to feed them with, from the falling off of grass in the fall, till the time of foddering commences.

Cattle Sheds.—If you have not already provided yourselves with sheds to protect your cattle from the peltings of the winter's storms, do so forthwith, if you have to thatch the roof; for surely you cannot sleep soundly under the consciousness that your cattle are exposed to the inclemency of a winter's storm.

Hogs.—If you have not already put up your hogs, do it at once, and commence feeding them with pumpkins, and be sure to boil them. If you have meal or ship-stuffs to spare, or ground oats and peas, mix a little with the boiled pumpkin, it will add much to the value of the feed. As soon as you begin to dig your potatoes, add the small ones to the pumpkins, and you will soon have the satisfaction of perceiving a great improvement in their growth. When you first put up your hogs to fat, give them each, twice a week, in their food, a spoonful of sulphur and saltpetre powdered, and once a week afterwards give them a handful of salt a piece in their food.

Fall Plowing.—If you have any stiff clay lands, that you design for spring grain of any kind, be sure to plow it up this fall, and have as much of the sur-

face of the furrow to the action of the frost as possible, which ameliorates and renders it permeable, by which means it will be in a situation to receive the seeds at a much earlier date, than when left till spring before plowing.

We will now leave the work on the farm and go into

THE GARDEN.

Cabbage plants.—If you sowed the early varieties of cabbages in due season, now is the time when they should be transplanted. To ensure their living through the winter, manure a bed well, spade it deeply, then form ridges two feet apart; drawing the ridges up pretty well; plant out the plants on the side of the ridges, about 18 inches apart; then fill up the ridges about half way with long manure, and they will withstand the winter's frost, and afford an early supply of cabbages next year.

Asparagus.—As soon as the stalks of your asparagus turn yellow, cut them down close to the earth; then clean the bed carefully from weeds, eradicating them thoroughly and drawing them into the alleys. Give the bed a good top-dressing of well rotted manure, say two inches in depth. After this, mark out the alleys, dig them one spade deep, spread the earth evenly over the bed; straighten the edges of the bed and round them off, and then fill up the alleys with straw.

Cellery.—Earth up your cellery.

Strawberry beds.—During any period of this month clear out the old strawberry beds from weeds, take out the runners and give your beds a good dressing of rotten leaves from the woods. When the winter sets in, cover the plants with long manure, or what is better if at hand, tan or saw-dust, and next season you may promise yourself and friends, (not forgetting, your humble servant, the writer,) a mess of strawberries and cream or strawberries and milk.

Horse Radish.—If you have any of this in your garden, dig it up, cut off the crown, put the roots in a cask or box and fill up with earth, and place it in a cool cellar for use in the spring. Prepare a bed, manure well and dig deep, and plant out the tops about one foot apart each way, and if you keep them clear of weeds next spring and summer, in the fall you may again enjoy this healthful vegetable with your roast beef and pork.

Gathering seed.—Seeds are to be gathered as they ripen, carefully labelled and secured; when they do not ripen simultaneously, and if the ripe seed cannot be gathered without too much labor, the whole plant should be taken up by the roots and suffered gradually to dry in the house, during which time the seeds will become ripe.

Digging up beds.—If you have any stiff or clayey beds in the garden, dig and throw them up into high ridges to receive the meliorating influence of the winter's frosts.

Weeds.—Extricate every weed that is in the garden; suffer none to go to seed, and much labor will be saved the next season.

[For the Northern Light.]

REPORT OF THE WEATHER, &c. FOR SEPTEMBER.

BY C. N. BEMENT.

The study of the weather is in itself of great extent, and every revolving day affords to the observer something new. Those who are partial to the country—and where is the man of genius who feels not a delight approaching to ecstacy, from the contemplation of its scenery, and the happiness which its cultivation diffuses?—those who have paid attention to the process of husbandry, and who view its occurrences with interest; who are at the same time alive to all the minutiæ of the animal and vegetable creation; who mark "how nature paints her colors, how the bee sits on the flower, extracting liquid sweets," will derive from the study of nature a gratification the most permanent and pure.

Our last report closed on the 24th of August, and from that date to the close of the month, we had very favorable weather for securing the barley and oat crop, which had been delayed in consequence of the storms that occurred previously. In the western part of this county much damage was sustained by the sprouting of the grain, by laying so long after being cut, in a wet or damp state.

The weather for the last month has been highly auspicious for the farmer to prepare his grounds for the reception of wheat and rye. The success which has attended the cultivation of wheat in this vicinity, for the last two years, has been such as to encourage the farmers, who have lands suitable for that grain, to adopt its cultivation, and great breadths have been sown. Powerful sunshine, with occasional showers, having afforded the necessary warmth and moisture for promoting vegetation, the plants soon made their appearance and look healthy and vigorous.

Up to the present date, (24th,) the weather has been remarkably favorable for maturing the corn and root crops generally. The slight frosts which occurred on the mornings of the 12th and 13th, slightly touched the cucumber, squash and pumpkin vines, and has given a brownish appearance to many fields of corn; still we cannot learn that it has received any material damage, and the late rains and warm weather have been peculiarly favorable to its ripening; and in consequence of which, the cutting up of the crop has been delayed to give it every opportunity of ripening. The crop is now considered safe, and a full average crop is anticipated. The writer planted his corn the second time, (the first planted having rotted in the ground,) on the first of June; it is now glazed and fit to pick. On cutting up our corn we noticed an unusual quantity of smut on the ears as well as on the stalks, and the same may be said of the crops of our neighbors, which have fallen under our observation.

Since the 14th inst. the weather has been most delightful, and the beneficial effect it has been the means of producing, particularly on roots and corn, is every where strikingly apparent; the moistened state of the earth, acted upon by a warm and genial sun, and not unfrequently by a close atmosphere, has caused vegetation to put forth its powers most surprisingly. The pastures have resumed their dark and lively green, and afforded a good and luxuriant "bite" for our stock, and a generous flow of milk from our cows.

Ruta-bagas, on warm soils and early sowed, are good; but on cold and less favorable lands to this crop, and later sown, are unpromising. The turnep season this year was much later than last, and before this time last year the leaves completely covered the ground, and the bulb would weigh from 3 to 4 pounds each. The beet and carrot crops are very promising, and have every appearance of being full an average crop.

The early planted potatoes, from the quantity of wet, followed by drying winds and mid-summer heat, hardened the root, and gave a ripened appearance to the potato while very small; in many instances the vines withered and dried early in August, the cause of which we could not discover, although we frequently examined them. The tops in some fields had the appearance of having been frost bitten, or as though scalding water had been thrown over them. It is supposed by some that this appearance was caused by the powerful heat of the sun shining on them when wet with rain. Let the cause or causes be what they may, it is generally believed, that the prospect of this crop is but a poor one, and they will fall below the average. There is some hope, however, still entertained for those later planted, as the weather is favorable and the tops are still green. On examining some of the hills we found a great number of tubers, but of rather small size. Should the frost keep off until a late period, they may still attain sufficient size to make a fair if not an average crop.

Our last report was up to the 24th August; we will now commence on the

25th, wind west of north, slight fog and heavy dew, sun out bright, warm and pleasant; wind changed to south, P. M.

26th, wind south, clear, warm and pleasant. A dark cloud passed to the east of us, and while we had but a few drops of rain, quite a shower, but of short duration, was experienced in the city and within two miles of us.

27th, wind south, sun out bright and very hot in the middle of the day; at night it clouded over, commenced raining, and continued at intervals through the night, accompanied with loud peals of thunder and sharp flashes of lightning, and high winds. Heard the city bells in the morning, and the boats letting off steam in P. M.; no alteration in the barometer. It must have been observed, that the rain which has lately fallen, has been generally accompanied with thunder.

28th, wind west, dark and stormy in the morning. At mid-day wind changed to north, sun out occasionally, and set surrounded with a deep crimson sky.

29th, wind north, warm and pleasant, sun out bright; wind changed to the south for a short time and then to the west, from which we had a gentle breeze the remainder of the day.

30th, wind north, clear and warm.

31st, wind south, clear, warm and pleasant, not a breath of air stirring. Heat increased in P. M. and became quite oppressive.

SEPTEMBER.

1st, wind south, cloudy, and a damp atmosphere; a brisk breeze during the day.

2d, wind south southwest; cool, damp and cloudy in the forenoon, and had very much the appearance of rain; cleared off in P. M. fair and warm. Noticed some of my neighbors topping their corn.

3rd, wind southwest, warm, and a dense fog in the morning, when it cleared off, and the sun poured down his scorching rays, and not a breath of air stirring, rendering the heat very oppressive. There were some indications of an approaching storm at night, and we observed a slight and gradual depression of the barometer.

4th, wind southwest, warm, dark and cloudy until 10 o'clock, when the sun burst out; no air stirring, and it became intensely hot. At P. M. a storm arose in the north and we had a sprinkling of rain, with considerable thunder, which continued, at a distance, for about two hours, and notwithstanding a stiff breeze, the weather was very oppressively hot.

5th, wind north, a fine breeze, cool and pleasant; sun out bright; heard the city bells. At night it clouded over and threatened rain.

6th, wind west of north, slight dew, cloudy; heard the city bells; at 10, sun out warm and pleasant. Wind changed to south P. M.

7th, wind south, over-cast and dark; a slight sprinkling of rain, and cloudy during the day. It is worthy of remark, that there has been a gradual rise in the barometer for the last two days, which finally rested at 30. Sowing of wheat commenced.

8th, wind east of south, some clouds flying, and the threatened storm has passed; sun out bright and warm; heard the city bells.

9th, wind north, cool, clear and pleasant; a brisk breeze until the setting of the sun, when it died away.

10th, wind north, cool, cloudy and the sun obscured during the day. Sowing of wheat and rye become general.

11th, wind north, cool, clouds flying high, a clear sun, and a pleasant day.

12th, wind north, clear and cool, slight frost; warm and pleasant during the day.

13th, wind north, clear and cool; quite a frost this morning; cucumbers and other vines show its effects, though not much injured. Fires quite comfortable nights and mornings. Wind changed in P. M. to the west.

14th, wind south, cloudy and dark; some sprinkling of rain in P. M., a brisk breeze; wind changed to north, commenced raining and continued, though moderately, during the night.

15th, wind north, rain continued with increased severity until after 12 M., when it literally poured down most copeously for an hour, swelling the streams to an unusual height, for so short a space of time. We have not heard of much damage being done in this vicinity; but we have been advised that some mill-dams and bridges in the western part of the county, have sustained considerable damage. The rain ceased from 1 o'clock, P. M. until 9, when it commenced again, accompanied by thunder, which was remarkably loud and long, rolling and leaving its sound in the distance.

16th, wind south, warm; a fog on the low grounds, clouds flying low in the morning; when the sun burst forth in all his splendor, and we had a delightful day.

17th, wind south, clear and pleasant.

18th, wind still south, with a damp and warm atmosphere; a gentle breeze in the morning, but soon became perfectly calm and very hot. At 5 P. M. the atmosphere presented the most striking indications, that it had become much disturbed. The wind varying from one point to another in quick succession; dark and thundering clouds approached from the northwest, and brought with them comparative darkness; loud and repeated peals of thunder broke overhead, and it was soon evident that the clouds were fully charged with electric matter. Flash after flash, in rapid succession, streaked down from every quarter,—the thunder rolling fearfully and the rain pouring down in torrents for a few moments, but the rolling thunder and flashes of lightning continued until a late hour.

19th, wind north, and a delightful day.

20th, wind west of north, high clouds, and a pleasant day. Cutting up corn commenced.

21st, wind south in the morning, and a gentle breeze from the west in P. M. After dark it clouded over and we were visited with a violent shower, accompanied with a strong wind, but of short duration; after which it changed to north, and the atmosphere became cooler. We had been threatened with this storm for several days, and a depression of the barometer was noticed this morning.

22d, wind north, clear and a cool breeze until P. M., when it lulled and we had a delightful day.

23rd, wind northeast, cloudy and a damp atmosphere; a depression of the barometer and a change of wind to the south at 9 o'clock, A. M. were strong indications of an approaching storm; but in the P.

M. it passed off, and the sun was out for a few moments.

24th, wind south, warm, sun out bright and clear; wind changed to west in P. M. and at 3 o'clock we experienced quite a shower, accompanied with violents winds for a few moments; it then became perfectly mild and calm, and the thunder rolled at a distance. A splendid rainbow was now observed, the arch rising in the southeast and resting in the north.

Three Hills Farm, Sept. 24th, 1843.

Literature and Science.

[For the Northern Light.]

MADEIRA.

BY JOHN A. DIX.

THE island of Madeira, both in respect to the mildness and salubrity of the climate, and its romantic scenery, is one of the most interesting and beautiful regions in the world. It lies in the Atlantic, about 350 miles from the African coast, and about 450 from the nearest point on the coast of Europe. It is, therefore, properly assigned by geographers to Africa, though it was discovered and is possessed by Portugal. But, what is exceedingly absurd, it is subject in some countries, and I believe in the United States, to the same quarantine regulations, in respect to commercial intercourse, as the African continent itself, though it is uniformly healthy and especially free from infectious diseases. The greatest extent of the island, from N. W. to S. E. is about 42 miles, and its breadth varies from 15 miles to 9. The city of Funchal, the capital, lies near its southern extremity, and is in N. lat. 32° 38′, and in W. long. 16° 54′ from Greenwich. There are four other islands, belonging to the Madeira group:—Porto Santo, about 45 miles east, and the three Desertas, about eighteen miles to the southeast. The former has about 1,800 inhabitants. The latter deserve their name. Their only inhabitants are a few hares, which range over them, and the sea fowl, which hover around their rocky and almost inaccessible sides. On one of them barilla is produced; but the men, who go there for the purpose of preparing it, are obliged to take with them the very water they drink.

Nothing can be fancied more luxuriant or rich than Madeira in spring, when the vines have put forth their leaves, and the delicate vegetation, which shrinks from the very moderate cold of its winter, has come out again. Though a perpetual verdue reigns throughout the lower parts of the island at all seasons of the year, he who would see it in full beauty, should not leave it until the first of June. Then it becomes more like a region of romance than the habitation of plodding men. For miles the whole face of the earth is buried under the broad, rich foliage of the vine, and wherever you go, flowers of exquisite beauty and plants of singular forms rise up around you, and load the air with fragrance. In winter, when looking down from the high mountains, by which the surface of the island is broken, you can see the trellis-work of cane, on which the vines are trained, covering the earth, as it were, with a vast web. But in spring all this disappears, and the earth appears but one mass of living green; every thing is covered with leaves, and the ranges of mountains are so near that the blue, which depends on distance, is scarcely perceptible.

The whole geological structure of the island is volcanic, and the igneous rocks are uniformly basaltic, generally compact, but often vesicular and scoriaceous. It was once supposed that Madeira, together with the Western and Canary Islands, formed a region of immense extent, which was sunk by some convulsion of nature. This theory has been refuted by closer investigations of their geological character. There is a great similarity between them, it is true; but the island of Madeira is for the most part the product of submarine volcanoes—not of one alone, but of several, the centres of which are still visible. The amphitheatre, in which Funchal lies, was obviously one of these centres of eruption. It abounds in the most singular formations, all bearing the impress of volcanic agency as distinctly as though the currents of lava were actually seen pouring down from the surrounding hills to the ocean, sometimes cooling in the columnar form, and at others upheaved by gases formed by the contact of the burning fluid and the water, and left in the shape of caverns, into which the sea is perpetually pouring its waves. For a great number of years the volcanic action has been extinct; but from the immense size of the mountains, their abruptness, and the depths of the valleys, it must have been exceedingly violent; while from the scoriæ, pumice, and the vesicular basalt in and about Funchal, it is manifest that the island, after it was elevated from the ocean, was for sometime the theatre of sub-ærial volcanoes. In St. Michael and some other islands of the Western and Canary groups, eruptions are still frequent; but none of the products of these recent volcanoes resemble the igneous formation in Madeira, though between the older ones in all these islands there is a strong similarity. What a field of inquiry and speculation do these facts open!

Luxuriant and fertile as Madeira is, it has been made so by force of immense labor. On the whole island there are but two levels of any extent. All the rest is but narrow valleys and steep hills. The highest elevation is 6,257 feet, and this height is attained within three miles of the ocean in an air-line. In order to bring the soil under cultivation, immense walls are built up, constituting a succession of terraces and artificial levels. To obtain a surface thirty feet in width, a wall of half that height, and sometimes more, is often raised to create and support it. With all this labor and expense, the island supplies only about one-third of its population with breadstuffs. The only article of export is wine. When there is an active demand for it, all is prosperity and abundance. But when the demand flags or ceases, there is a corresponding depression. It is a wretched reliance for any people; and there is no doubt that the industry of the island might be turned to objects calculated to give it a steady and permanent prosperity. From 1812 to 1820 the annual export of wine was sometimes equal to 15,000 pipes. The decrease may be estimated by the following statement of the amount entered for exportation during the last fifteen years: in 1828, 9,623 pipes; in 1829, 8,104 pipes; in 1830, 5,499 pipes; in 1831, 5,533; in 1832, 7,163; in 1833, 8,683; in 1834, 9,228; in 1835, 7,730; in 1836, 7,913; in 1837, 8,123; in 1838, 9,828; in 1839, 9,043; in 1840, 7,975; in 1841, 7,157; and in 1842, 6,270 pipes. Let the wine-drinkers look at our custom-house returns for the years above named, and consider how much of these exports was destined to England, Russia, and the north of Germany; and they will have some idea of the amount of liquor they have drunk under spurious names.

In a former article I gave a register of the thermometer for a few days (I think) in November and December. The winter continued delightful until February. In the whole month of January there were but three days on which any rain fell. But February was the worst month Madeira ever knew. From the 8th to the 22nd inclusive, it rained every day, sometimes only for a few hours during the 24, but often half the day and night. During the whole of this time the snow covered the tops of the mountains within five miles of the city. Once it came down within two miles and a half, and within about 2,300 feet of the level of the ocean. The temperature of the city was strongly affected by this near approach of frost, as the following extract from my register will show:

1843. THERMOMETER.

Feb.	7 A.M.	2 P.M.	7 P.M.	Wind.	Weather.
8th,	58°,	66°,	58°,	N.W.	Rainy.
9th,	54,	62,	54,	N.W.	do.
10th,	48,	60,	52,	N.W.	do.
11th,	50,	54,	54,	N.W.	do.
12th,	54,	67,	58,	N.W.	Showery.
13th,	57,	69,	53,	S.W.	do.
14th,	60,	69,	63,	S.W.	do.
15th,	60,	67,	60,	W.	do.
16th,	61,	65,	62,	W.	do.
17th,	60,	65,	56,	W.	Rainy.
18th,	52,	61,	54,	N.W.	Showery.
19th,	52,	67,	61,	N.W.	Rainy.
20th,	62,	66,	58,	N W.	do.
21st,	57,	65,	58,	N.W.	do.
22nd,	60,	66,	60,	N.W.	do.

From this time to the 17th of March the weather was brilliant and beautiful. This is the worst season Madeira has ever known: and yet in Funchal the thermometer was only once during the day as low as 48°. During the night of the 11th it fell to 45°, a temperature previously unprecedented—at least for fifty years. Notwithstanding this bad weather, I am of opinion that there is no better climate for invalids. It is remarkably equable as well as mild, the mean temperature for the year being 64°, and the greatest diurnal variation 17 degrees Fah., and this only occurring once in many years. The rains, which occur only at particular seasons, are in their nature tropical, and are usually showers rather than continuous storms. Certainly, there is no climate so delightful, which is of easy access to Europeans, and it has a great advantage over most tropical regions on the American coast in being more temperate and bracing.

I have said that the island belongs to Portugal. It is, indeed, in respect to its government, placed on the footing of an integral part of the kingdom. It is represented in the popular branch of the cortes or national legislature, and it is not long since the queen raised one of its citizens, a gentleman distinguished for his talents and character, to the dignity of the peerage. It has about 130,000 inhabitants, of whom about 16,000 are comprised within the compact part of the city of Funchal. A more hardy or hard-working population cannot be found in any part of the world, and few communities are more strongly distinguished for their private and domestic virtues. Though the lower parts of the island enjoy perpetual summer, among the mountains the temperature is often exceedingly low during the winter months; and while all is serenity in the valleys, the inhabitants above are enveloped in the most violent storms of sleet and snow. Almost every winter some of them perish with cold. They are out at all seasons. They perform the offices of beasts of burden. Almost every thing that is carried to the towns, they bear upon their backs. They go where even the mule cannot tread in safety, carrying enormous loads; and when overtaken by storms upon the mountain tops, they are sometimes frozen to death, or, in the effort to descend, lose their foothold upon the slippery rocks and are precipitated hundreds of feet into the depths beneath them.

While Funchal and the surrounding district is so mild in winter, it is exempt in summer from the excessive heat of tropical climates. The thermometer rarely rises above 80 deg. in perfect shade. Occasionally, however, the Leste or east wind blows directly from the African coast, and then the temperature is sometimes near 90 deg. The effects of this wind are very remarkable. Though it traverses 350 miles of ocean, it brings no moisture with it. It is singularly dry. Furniture shrinks and cracks as it does with us when exposed to the heat of anthracite coal, and the eyes, nostrils, and mouth have the sensation of rapid evaporation. When it continues for two or three days, it brings with it insects, and sometimes birds, known only as inhabitants of the African continent. The Leste is, however, not a frequent visiter. We had it twice during the winter, but it did not sensibly increase the heat.

With the exception of its delicious climate and romantic scenery, Madeira has few attractions for visiters. There are no paintings, statuary or magnificent edifices; and its antiquities reach only a few centuries back. The most interesting of its associations are connected with the discoverer of the New World. Columbus married in the island of Porto Santo, and the house, in which he was accustomed to sojourn during his visits to Madeira, which were frequent before the discovery, still remains, though it is in a very dilapidated state. But the invalid, though he may not find in Madeira as many objects of interest as in the southern countries on the European continent, is sure to find, if he can find any where, what is far more valuable—health. We left it with great regret, and though we were two months in Spain, and have been nearly as long in Italy, we have not yet found a temperature so mild and congenial. Every where the season appears to be an unusual one. We are a mile out of Florence, and have yet scarcely felt the heat. The thermometer has only once been as high as 86 deg. and then only for a few hours. This morning it stood at 59 deg. at 7 o'clock. Yet the vine, the olive, and the infinite variety of fruits are all in full luxuriance, and the harvest will be abundant. But beautiful as nature is here, highly as the country is improved and embellished, our own native land loses nothing by comparison with them. To our noble forests, our magnificent lakes and broad deep rivers, and, above all, our free institutions, in the maintenance of which brute force has no share, the true American turns in all his wanderings as to the spot, where the great ends of life are best attained and enjoyed.

Florence, Italy, July 22, 1843.

[For the Northern Light.]

STANZAS TO ——

Adieu, gentle maid! Fare thee well, if no more
Thy glance or thy smile may my pathway caress!
I bid thee adieu! but must ever adore
The beauty that tempted unsanction'd address.

The sun often sends an unmerited ray
Where the pris'ner gropes in a wearisome cell;
But oh! had the beam never told him of day,
He never had sought in its warm light to dwell.

Blame not the heart that, with thee for its sun,
Should glow into warmth, or burn with desire:
Blame not the impulse, that heedlessly run,
Unbidden before thee, its light to admire.

Adieu! while on earth we never may meet,
The stars of our fates too widely must sever;
Yet may'st thou ever the Rose of Life greet,
While its briers and thorns are broken forever!

Albany, Aug. 1843. ROY.

[Translated for the Northern Light.]

LA PLACE'S NEBULOUS THEORY OF THE ORIGIN OF THE BODIES CONSTITUTING THE SOLAR SYSTEM, AS GIVEN IN NOTE VII. OF THE SIXTH EDITION OF HIS "EXPOSITION DU SYSTEM DU MONDE."

BY GEORGE R. PERKINS.

We have throughout the preceding subject, to enable us to return to the cause of the primitive motions of the planetary system, these five phenomena, viz.: the motion of the planets in the same direction, and nearly in the same plane; the motion of the satellites in the same direction as that of the planets; the motion of rotation of these different bodies and of the sun, in the same direction as their motions of projection and in planes differing but little from each other; the small eccentricity of the orbits of the planets and of the satellites; finally, the great eccentricity of the orbits of comets, although their inclinations have been left to chance.

Buffon is the only one to my knowledge, who, since the discovery of the true system of the world, has attempted to return to the origin of the planets and the satellites. He supposes that a comet, coming in contact with the sun, has torn from it a torrent of matter which united at a distance, forming globes of greater or less magnitude and at greater or less distances from this star: these globes becoming by cooling opake and solid, are the planets and their satellites.

This hypothesis satisfies the first five preceding phenomena; since it is evident that all bodies thus formed ought to move very nearly in the plane which passes through the centre of the sun, and in the direction of the torrent of matter which has produced them: the other four phenomena appear to me to be inexplicable by his method. In truth, the absolute motion of the molicules of a planet, ought to have the same direction as the motion of its centre of gravity; but it does not follow that the motion of rotation of the planet ought to have the same direction: thus, the earth might revolve from east to west, and yet the absolute motion of each of its molecules would be directed from the west to the east; which ought to apply to the motion of revolution of the satellites, of which the direction, in the hypothesis required, is not necessarily the same as that of the projectile motion of the planets.

A phenomenon, not only very difficult to explain in this hypothesis, but which is contrary to it, is the small eccentricity of the orbits of the planets. We know by the theory of central forces, that if a body moving in an orbit returning into itself about the sun, come in contact with the surface of this star, it will constantly pass through this point at each of its revolutions; from which it follows, that if the planets were primitively detached from the sun, they will touch it at each return towards this star, and their orbits, far from being circular, would be very eccentric. It is true that a torrent of matter, torn from the sun, could not be exactly compared to a globe which comes in contact with its surface: the impulsion which the parts of this torrent receive from each other, and the reciprocal attractions which they exercise, may, in changing the direction of their motions, elongate their perihelions from the sun. But their orbits ought always to be very eccentric, or at least, they would not all have small eccentricities, only by the most extraordinary chance. In short, we cannot see in the hypothesis of Buffon, why the orbits of more than one hundred comets already observed, are all very elongated: this hypothesis is then very far from satisfying the preceding phenomena. Let us see if it is possible to rise to their true cause.

Whatever may be its nature, since it has produced or directed the motion of the planets, it is necessary that it should have embraced all these bodies; and in view of the prodigious distance which separates them, it could only have been a fluid of immense extent.

In order that it should have given in the same direction, a motion nearly circular about the sun, it is necessary that this fluid should have surrounded this star, like an atmosphere. The considerations of planetary motions conduct us to suppose that in virtue of an excessive heat, the atmosphere of the sun was primitively extended beyond the orbits of all the planets, and that it was successively contracted to its actual limits.

In the primitive condition in which we have supposed the sun, it resembled those nebulæ which the telescope discloses to us composed of a nucleus more or less brilliant, surrounded by a nebulosity which, in condensing to the surface of the nucleus, transforms it into a star. If we conceive, by analogy, all stars formed in this manner, we can imagine their condition anterior to their nebulosity, itself preceded by other conditions in which the nebulous matter was more and more diffuse, the nucleus being less and less luminous. We shall thus arrive, in going back as far as possible, to a nebulosity so diffuse, that one could hardly believe in its existence. For a long time, the particular disposition of stars visible to the naked eye, had attracted the attention of philosophic observers.—Mitchel has already remarked that it is barely probable that the stars of the Pleiades, for example, have been contracted into the narrow space which contains them, by chance alone; and he has concluded that this group of stars, and similar groups which the heavens present to us, are the effect of a primitive cause or of a general law of nature. These groups are a necessary result of the consideration of nebulæ having several nuclei; for it is obvious that the nebulous matter being constantly attracted by these different nuclei, they must finally form a group of stars, similar to those of the Pleiades. The consideration of a nebulæ having two nuclei, will in a similar way form stars very near each other, revolving about each other, such as the double stars whose respective motions have already been noticed.

But in what manner has the solar atmosphere given rise to motions of rotation and revolution of the planets and satellites? If these bodies had penetrated to a great depth into this atmosphere, its resistance would have caused them to fall upon the sun; we may then conjecture that the planets have been formed at these successive limits, by the condensation of zones of vapors, arising in cooling, left in the plane of its equator.

Let us recall the results which we have given in the tenth chapter of the preceding book. The atmosphere of the sun cannot extend itself indefinitely: its limit is the point where the centrifugal force, arising from its motion of rotation, is balanced by its weight; now in proportion as the cooling contracts the atmosphere and condenses upon the surface of the star, the molecules which are near it, the motion of rotation augments; because, in virtue of the principle of areas, the sum of the areas described by the radius vector of each molecule of the sun and of its atmosphere, and projected on the plane of its equator, being always the same, the rotation ought to be more rapid, when these molecules approach the centre of the sun. The centrifugal force arising from this motion, also becoming greater, the point where the weight is equal to it, is nearer this centre. In supposing then, that which is natural to admit, that the atmosphere was extended at some epoch, even to its limit; it has, in cooling, abandoned the molecules situated at this limit and at the successive limits produced by the increment of the rotation of the sun. These molecules abandoned, have continued to circulate about this star, until their centrifugal force was balanced by their weight. But this equality not having place with reference to the atmospherical molecules situated on the parallels to the solar equator, these are caused to approach it by their attraction from the atmosphere, in proportion as they are condensed, and they do not cease to belong to it, until that by this motion, they are brought near this equator.

We will now consider the zones of vapor, successively abandoned. These zones ought, since they are throughout similar, to form by their condensations and the mutual attraction of their molecules, different concentric rings of vapors, revolving about the sun. The mutual friction of the molecules of each ring ought to accelerate some and retard others, until they have acquired the same angular motion. So that the real velocity of the molecules more distant from the centre of the star, have been greater. The following cause ought also to contribute to this difference of velocity. The molecules the most distant from the sun, and which by the effects of cooling and condensation, are caused to approach towards it to form the outside of the ring, have always described areas proportional to their times, since the central force which acts upon them has been constantly directed towards this star; now this constancy of areas requires an increment of velocity according as they approach the star. We see that the same cause ought to diminish the velocity of the molecules which are elevated towards the ring, to form its inner part.

If all the molecules of a ring of vapors, continued to condense without separating, they would at length form a liquid or solid ring. But the regulating which this formation requires throughout all the parts of the ring and in their cooling, would make this phenomenon extremely rare. Thus the solar system presents only a single example of this kind, that of the rings of Saturn. In most cases, each ring of vapor has broken into several masses, which moved with velocities differing but little from each other, have continued to revolve at the same distance about the sun. These masses ought to take a spheroidal form, with a motion of rotation in the same direction as that of their revolution, since their interior molecules have less real velocity than their exterior ones; they have then formed as many planets in the state of vapor. But if one of them has been sufficiently powerful, to unite successively by its attraction all the others about its centre, the ring of vapor will have thus been transformed into a single spheroidal mass of vapor, revolving about the sun, with a rotation in the same direction as that of revolution. This last case has been the most common: however, the solar system presents to us the first case in the four small planets which move between Jupiter and Mars; unless we suppose with M. Olbers, that they primitively formed a single planet, which by a powerful explosion was divided into several parts receiving different velocities.

Now, if we trace the changes which an ulterior cooling has produced in these planets of vapor, whose formation we have already conceived, we shall see formed at the centre of each of them, a nucleus constantly increasing, by the condensation of the atmosphere which surrounds it. In this condition, the planet would resemble perfectly the sun in its nebulous state, which we have been considering; cooling ought then to produce at the different limits of its atmosphere, phenomena similar to those which we have described, that is to say, rings and satellites revolving about its centre, in the direction of its motion of rotation, and revolving in the same direction about their own axes. The regular distribution of the mass of the rings of Saturn, about its centre and in the plane of its equator, naturally results from this hypothesis, and without it, would become inexplicable: these rings appear to me to be proofs always existing of the primitive extension of the atmosphere of Saturn, and of its successive contractions. Thus the singular phenomena of the small eccentricity of the orbits of the planets and satellites, of the small inclination of their orbits to the solar equator, and of the identity in the direction of the motions of rotations and of revolutions of all these bodies, with that of the rotation of the sun, flow from the hypothesis which we have proposed, and which gives to it a high degree of probability, which may still be augmented by the following considerations:

All the bodies which revolve about a planet, having been, according to this hypothesis, formed by zones which its atmosphere has successively abandoned, and its motion of rotation becoming more and more rapid, the duration of this motion ought to be less than that of the revolution of the different bodies; that which has place similarly for the sun compared with the planets.* All this is confirmed by observations. The duration of Saturn's nearest ring, is, according to the observations of Herschel, 0.438 days, and that of the rotation of Saturn, is only 0.427 days. The difference 0.011 days is inconsiderable, as it ought to be, because that portion of the atmosphere of Saturn, which the diminution of heat has deposited upon the surface of this planet since the formation of the ring, is also inconsiderable, and passing from a small height, ought to augment the rotation of the planet but little.

If the solar system had been formed with perfect regularity, the orbits of the bodies composing it, would be circles, whose planes, as well as those of their different equators and of the rings, would coincide with the solar equator. But we perceive that variations without number, which ought to exist in the temperature and the density of the different parts of those great masses, have produced the eccentricity of their orbits, and the deviations of their motions from the plane of this equator.

In our hypothesis, comets are foreign to the planetary system. Considering them, as we have already done, as small nebulosities wandering from the other systems into the solar system, and formed by the condensation of the nebulous matter scattered with such profusion in the universe, we see that when they reach that portion of space where the attraction of the sun predominates, it causes them to describe elliptic or hyperbolic orbits. But their velocities being equally possible in all directions, they ought to move indifferently in all directions and under all inclinations to the ecliptic; which is found to correspond with observation. Thus the condensation of nebulous matter, by which we have explained the motions of rotation and revolution of the planets and

* Author's Note.—Kepler, in his work *de Motibus Stellæ Martis*, has explained the motion of all the planets in the same direction, by means of a kind of immaterial emanations from the surface of the sun, and which, preserving the motion of rotation which they have at its surface, impart this motion to the planets. He consequently concluded that the sun revolved about an axis in a time less than that of the time of the revolution of Mercury; that which Galileo recognized soon after by observation. The hypothesis of Kepler is without doubt inadmissible; but it is remarkable that he should have made the identity of the direction of the motions of the planets depend upon that of rotation of the sun; so that this tendency appears natural.

their satellites in the same direction and in planes differing but little from each other, explains equally well why the motion of comets depart from this general law.

The great eccentricity of the cometary orbits, is still a result of our hypothesis. If these orbits are elliptical they are very elongated, since their greatest diameters are at least equal to the radius of the sphere of activity of the sun. But these orbits may be hyperbolical, and if the axes of the hyperbolas are not very great in comparison with the mean distance of the sun from the earth, the motion of the comets which describe them, will appear sensibly hyperbolic. Moreover, of one hundred comets at least whose elements are known, not one appears to move in a hyperbola; it necessarily follows that the chances of describing a hyperbola are extremely rare compared with the contrary chances. Comets are so small, that they are not visible, only when their perihelion distance is inconsiderable. Until now, this distance has not surpassed twice the diameter of the terrestrial orbit. We conceive that in order to approach so near the sun, their velocity at the moment of their entrance into its sphere of activity, ought to have a magnitude and direction comprised within narrow limits. In determining by the analysis of probabilities, the ratio of the chances within these limits, to give a sensible hyperbola, to the chances of giving an orbit which may be confounded with a parabola; I have found it to be at least six thousand to one, that a nebula which penetrates into the sphere of activity of the sun, in such a manner as to be observed, will describe an ellipse very elongated, or a hyperbola which by reason of the magnitude of its axis, will be sensibly confounded with a parabola, in that part which we observe: it is then not surprising that as yet, we have not recognized hyperbolic motions.

The attraction of the planets, and perhaps the resistance of etherial mediums, has changed several cometary orbits, into ellipses whose major axis is much less than the radius of the sphere of activity of the sun. These changes may also result from meeting with these bodies; because it follows from our hypothesis in respect to their formation, that there ought to be a prodigious number in the solar system; those which came sufficiently near the sun, are only able to be observed. We have reason to believe that a similar change has taken place in the orbit of the comet of 1759, whose greater axis does not exceed thirty-five times the distance of the sun from the earth. A still greater change has taken place in the orbits of the comets of 1770 and of 1805.

If any of the comets have penetrated into the atmosphere of the sun and of the planets at the time of their formation, they ought in describing spirals, to have fallen upon these bodies, and by their fall, they would have caused the planes of the orbits and the equators of the planets to deviate from the plane of the solar equator.

If among the zones abandoned by the atmosphere of the sun, there were found moleculus too volatile to unite with the planets; they ought, in continuing to circulate about the sun, to present all the appearances of the zodiacal lights, without opposing a sensible resistance to the different bodies of the planetary system, either on account of its extreme rarity, or because its motion is very nearly the same as that of the planets which encounter it.

A profound examination of all the circumstances of this system increases still the probability of our hypothesis. The primitive fluidity of the planets is clearly indicated by the flattening of their figure, comformably to the laws of mutual attraction of their molecules: it is moreover proved in regard to the earth, by the regular diminution of gravity, in passing from the poles to the equator.† This condition of primitive fluidity, to which we are conducted by astronomical phenomena, ought to manifest itself in that of natural history as presented to us. But in order to investigate this, it is necessary to take into consideration, the immense variety of combinations formed from all terrestrial substances mixed in the state of vapor, when the decrease of temperature has permitted their elements to unite; it is also necessary to consider the prodigious changes which this loss of temperature ought successively to produce in the interior and upon the surface of the earth, in regard to all its productions, in the constitution of the pressure of the atmosphere, in the ocean and in bodies which tend to dissolution. In short, it is necessary to have regard to sudden changes, such as great volcanic eruptions, which have disturbed at different epochs, the regularity of these changes. Geology, pursued under this point of view, which connects it with Astronomy, would be able on many points to acquire precision and certainty.

One of the most singular phenomenon of the solar system, is the rigorous equality which we observe in the angular motions of rotation and of revolution of each satellite. There is an infinite number of chances to one, that it is not the effect of chance. The theory of universal gravity causes the infinity of this probability to disappear, in showing that it is sufficient for the existence of this phenomenon, that at the origin, these motions have differed but little. Then the attraction of the planet has established between them a perfect equality; but at the same time, it has given rise to a periodical oscillation in the axis of the satellite, directed towards the planet, an oscillation whose extent depends upon the primitive difference of these motions. The observations of Mayer on the librations of the moon, and those of M. M. Bouvard and Nicollet, made upon the same body, at my request, not having recognized this oscillation, the difference upon which it depends, ought also to be very small; which indicates with a high degree of probability, a special cause which at first has included this difference in very narrow limits, so that the attraction of the planet has been able to establish between the mean motions of rotation and of revolution, a rigorous equality, and which afterwards ended by destroying the oscillations which this equality has given rise to. Both these effects result from our hypothesis; because we conceive that the moon in the state of vapor, would form by the powerful attraction of the earth, an elongated spheroid whose greater axis ought always to be directed towards this planet, by reason of the facility with which the vapors yield to the smallest forces which act upon them. The terrestrial attraction continuing to act in the same manner, while the moon is in a state of fluid, ought at length, in causing the two motions of the satellite to constantly approach each other, to cause their difference to fall in the limits which commence the rigorous establishment of their equality. Afterwards, this attraction ought to annihilate by degrees the oscillation which this equality has produced in the greater axis of the spheriod, directed towards the earth. It is in this way that the fluids which cover this planet, have destroyed by their friction and by their resistance, the primitive oscillations of its axis of rotation, which are now only subject to the nutation resulting from the actions of the sun and moon. It is easy to conceive that the equality of the motions of rotation and of revolution of the satellites presents an obstacle to the formation of rings and of secondary satellites by the atmospheres of these bodies. Thus observations have not as yet indicated any thing of the kind.

The motions of the first three satellites of Jupiter present a phenomenon still more extraordinary than the preceding; and which consists in this, that the mean longitude of the first, minus three times that of the second, plus twice that of the third, is constantly equal to two right angles. There is an infinite number of chances to one that this is not the result of chance. But we have seen that in order to produce it, it is sufficient that at the origin, the mean motion of these three bodies, should have very nearly satisfied the ratio which renders it zero, the mean motion of the first, minus three times that of the second, plus twice that of the third. Then their mutual attraction has established rigorously this ratio; and moreover, it has rendered constantly equal to a semicircumference, the mean longitude of the first satellite, minus three times that of the second, plus twice that of the third. At the same time, it has given rise to a periodical inequality which depends upon the small quantity which the mean motions departed primitively from the ratio which we have announced. Although Delambre has with care endeavored to detect this inequality by observations, still he has failed; which proves it to be extremely small, and which, consequently, indicates with a high degree of probability a cause which has made it disappear. In our hypothesis, the satellites of Jupiter, immediately after their formation, did not move in a perfect vacuum; the molecules the least condensible of the primitive atmospheres of the sun and of the planet, would then form a rare medium of which the different resistance for each of these bodies, has made their mean motions approach by degrees to that of the required ratio; and when these motions have attained the requisite conditions so that the mutual attraction of the three satellites would rigorously establish this ratio, the resistance has constantly diminished the inequality which this ratio has produced, and has finally rendered it insensible. We cannot better compare these effects, than to the motion of a pendulum impressed with a great velocity, in a medium of but little resistance. It would at first describe a great number of circumferences; but at length, its motion of circulation, always decreasing, would change it into an oscillatory motion, which, diminishing more and more, by the resistance of the medium, would finally be annihilated: then the pendulum would reach a state of repose, and forever continue so.

† Translator's Note.—The text reads "elle est de plus prouvée pour la terre, par la diminution régulière de la pesanteur, en allant de l'équateur aux pôles." This is obviously a mistake. It ought to be as rendered above.

[For the Northern Light.]

A WINTER NIGHT.

BY W. K. COLE.

I.

The starry light, of a winter night,
On the icy plain is gleaming;
While bright and high, in the polar sky,
The northern lights are streaming.
A ruddy glow, o'er the spotless snow,
Like the morning faintly blushing,
Is spreading far, round the pale north star,
As the mimic fires are rushing.

II.

But a change is nigh, in the spangled sky,
A dusky cloud is low'ring,
And the winds come forth, from the distant north,
O'er the realm of the frost king scouring;
Like the mist of morn, on the whirlwind borne,
The fleecy snow is curling,
And the wild winds haste, o'er the frozen waste,
The clouds on their pinions whirling.

III.

The pine tree green, in his frosty sheen,
O'er the leafless forest waving,
Pours forth his wail, on the winter gale,
Which his tow'ring crest is braving.
High in the air, rears the old oak bare,
With his proud form slightly bending,
His sullen roar, as the blast sweeps o'er,
With the wail of the pine tree blending.

ACTUAL REVENUE OF THE IRISH CHURCH IN 1843,

As stated by Mr. Ward, in the House of Commons, August 1st.

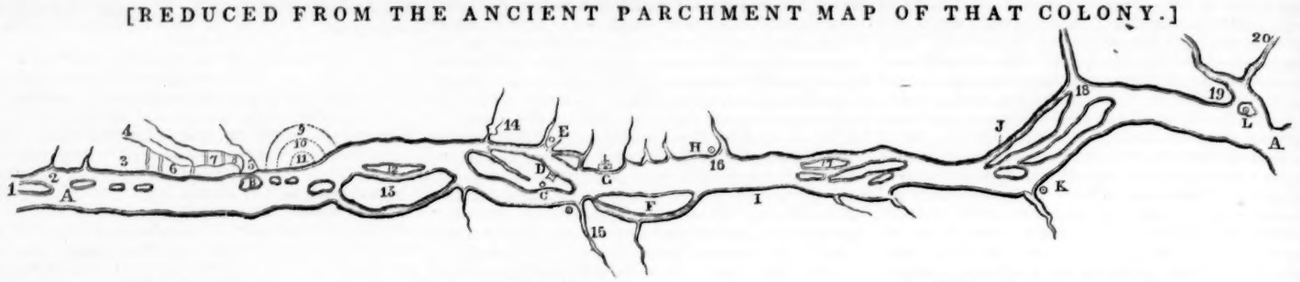
Episcopal Revenues:		
Land and tithes—gross,.....		£151,127
Deans and prebends, exclusive of those attached to Episcopal sees, ...		34,481
Minor canons and vicars choral,.....		10,525
		£196,133
Parochial Benefices. Value of Glebes and Tithes, Ministers' Money, Easter Offerings, &c.:		
Province of Armagh,.....	£256,372	
Tuam, ...	42,738	
Dublin, ...	121,859	
Cashel, ...	189,682	
		610,651
Gross receipts,.....		£806,784
Tithe composition:		
Parochial,.....		£486,7 5
Episcopal,.....		9,515
Received by Dignitaries,.....		24,360
		£520,660
Deduct 25 per ct. for rent-charge, under act of 1838, ...		130,165
Remain, ...		£390,495
Add episcopal revenues, after deducting £33,875 for tithes received by bishops and other dignitaries,.....		162,258
		£552,753
Population census of 1834, by commissioners of public instruction:—		
Protestant Episcopalians,.....		£962,064
Presbyterians, ...		642,356
Other Protestant dissenters,.....		21,808
Catholics, ...		6,327,712
Total,.....		7,953,940
But the Wesleyan Methodists, who are all included in the establishment amount to 100,000.		
Deduct these, and the Protestant Episcopalians will be,.....		752,064
Protestant dissenters, ...		764,164
Rate of remuneration for Episcopal instruction about,.....	14s. 9d.	per head.
Presbyterians, ...	1 0	"
Wesleyans and Catholics, ...	0 0	

Art is long, but Time is fleeting,
And our hearts, though strong and brave,
Still, like muffled drums, are beating
Funeral marches to the grave.

[Longfellow.

MAP OF RENSSELAERWYCK, FOUNDED 1630.

[REDUCED FROM THE ANCIENT PARCHMENT MAP OF THAT COLONY.]



REFERENCES.

A A. Hudson River.
B. Smacky Island.
C. De Laet's-burg.
D. Rensselaer's-burg, where Killian Van Rensselaer first settled.
E. Goodyn's-burg.
F. De Laet's, now Van Rensselaer's, Island.
G. Fort Orange, now Albany.
H. Bloemhart's-burg.
I. Die Kop's huys.
J. Greynen Bosch.
K. Ununwat's Castle.
L. Monemin's Castle.
1. Bearen Island.
2. Dose Keel heest van Waterval.
3. Bouw Landt No. 1, lang 1326 treeden, brœdt 536.
4. No. 2 and 5 lang 2336 treeden, brœdt 300.
5. No. 6, lang 500; brœdt 325.
6. No. 3, lang 2000; brœdt 266.
7. No. 9, lang 450; brœdt 60.
8. No. 5. lang 550; brœdt 54.
9. Vlack landt met weynick boomen.
10. Verdron eleen landt.
11. Riot Valley.
12. Goodyn Eylanden.
13. Paep Sykouekees Keel.
14. Goodyn's Kill heest een Waterval.
15. De Laet's moulen kill aende Waterval.
16. Bloemhart's Kill.
17. Bloemhart's Eylanden.
18. Rensselaer's Kill aende Waterval.
19, 20. Waterval.

[For the Northern Light.]

NOTES ON THE NEW NETHERLANDS.

BY DR. E. B. O'CALLAGHAN.

CONTENTS:—Rensselaerwyck—Privileges of the Patroon—Expense of importing settlers in those days—Officers of the Colonie—Van Rensselaer sets up a trading post for the Indians—Fortifies Bearen Island, and claims the rights of sovereignty—Imposes duties on traders at Fort Orange—Lays a toll on craft navigating the Hudson, and fires on a vessel which refuses to lower her colors whilst passing Rensselaerstein—Protests and counter-protests in consequence—Continued encroachments of the Swedes on the South river—They build a number of forts in that quarter, and exclude the Dutch from all access to those waters—Description of the Delaware, by an ancient Dutch writer—Kieft issues letters of marque against the Spaniards—Several of their merchantmen are brought as prizes into New Amsterdam, and confiscated—The Director General and Council engage in exploring the country for gold and precious metals—Kieft recalled, and changes proposed in the management of the affairs of the New Netherlands.

The troubles with the English and the Indians were not the only embarrassments against which WILHELM KIEFT had to contend during his administration. Whilst he was occupied protesting against the former, and fighting the latter, the Patroon of Rensselaerwyck was endeavoring to erect an independent principality at the head of the navigable waters of the Hudson river, and was arrogating the prerogatives even of sovereignty itself.

Having obtained from the Indians, "in consideration of certain parcels of goods," a title to "the land named *Sannahhagog*, lying on the west side of the North river, (and now called Coeymans,) having its length a little higher than Beeren, [Bear's] Island, up the river 'till unto Smacky Island; in breadth two days journey unto the heart of the country," and purchased also "the lands extending along the river south and north, from Fort Orange to a little south of Mænemine's Castle," and eligibly situated on the east shore, from the place over against Castle Island; from *Sectanock*, the mill-creek, or north to *Megagonse*, in full extent about two great miles,"* KILLIAN VAN RENSSELAER despatched some colonists with farming stock, implements and necessaries, and departed, himself, for the New Netherlands in 1637, to superintend, in person, the management of those extensive estates, and to secure, as well as exercise, the privileges conferred on him by the civil law, and by the charter of 1629.

By these he was clothed expressly with "the chief command and lower jurisdictions," and thus entitled to establish courts, and appoint officers and magistrates to take cognizance of all crimes committed within his colony, murder, treason, and such as affected life or limb excepted; to determine all disputes between his vassals, and all other settlers in the territory, and all questions as to titles, possession, boundaries of lands and contracts; and finally to decide all civil suits where the sum in litigation was below fifty guilders, or $20; beyond which amount an appeal lay to the Director General and Council at Fort Amsterdam. To him also belonged the right to a certain portion of the purchase money of every estate within his colony, that changed its owner by sale, or by other means equivalent thereto; which sum was to be paid by the purchaser, exclusive of the price stipulated between him and the seller. And in these cases he possessed the privilege of taking such property within a certain time after the sale, at the highest price offered for it. All the colonists were obliged to grind their corn at the Patroon's mill, where a fixed portion of the grain was taken as his fee; and no "person or persons whatsoever," were privileged to fish or to hunt throughout his vast wilderness, except himself or such as he permitted.

Taking advantage of the fortified trading post which the West India Company erected some three and twenty years before, on the left bank of the Hudson, and which, fortunately for Van Rensselaer, happened now to be the centre of his newly acquired estates, he caused several dwellings to be built around this post, then called Fort Orange, which constituted at once a nucleus for, and a protection to his infant settlement. Hither came, year after year, the colonists and farmers whom his agents forwarded, in their own or the company's ships, for the colony of Rensselaerwyck.*

Mr. Van Rensselaer had the good fortune to arrive in the New Netherlands during the administration of Wouter Van Twiller, to whose friendship he was indebted for a large and immediate supply of stock, consisting of horses, cows, sheep, and other cattle, which were "driven off to the Colonie" from the company's farms in the neighborhood of New Amsterdam, and to this quarter he applied from time to time, whenever he required an additional supply.*

The situation of the colonists was, however, one of much delicacy and danger for some time after their first arrival, in consequence of the proximity of tribes of fierce and warlike savages, whose passions the merest accident might fan into deadly hatred against the feeble settlement. Prudence and cautious policy had the effect, eventually, of securing the good will of the Aborigines; and the Rev. John Megapolensis, himself among the earlier settlers, was, in a few years, able to bear the following testimony to the good understanding that prevailed among the Indians and their white neighbors. "Though they are," he says, "very cruel to their enemies, they are very friendly to us; we are under no apprehensions from them; we go with them into the woods; we meet with one another sometimes one or two miles from any houses, and are no more uneasy about it than if we met with Christians; they sleep by us too, in our chambers. I have had eight at once who laid and slept upon the floor, near my bed, for it is their custom only to sleep on the bare ground."†

The settlement of Rensselaerwyck having proceeded thus far; the organization of the local government having been completed, by the appointment of the colonial officers, who then were a Director or Commander of the colony; a Sheriff, who officiated also as Attorney-General, and a Colonial Secretary, and by the establishment of a Court of Justice for the preservation of order and the arrangement of disputes among his vassals; and the good will of the savages having been secured, the Patroon next turned his attention to securing the commercial advantages which his position offered. In these views he was ably seconded by the individ-

* Alb. Rec. GG., 13, 23.

* Mr. Barnard attempts to illustrate, in a note at p. 108 of his "Historical Sketch of the Colony of Rensselaerwyck," "the heavy expense of planting a colony at that time." He says, "I have found the record of an account presented by Gov. Van Twiller to Killian Van Rensselaer, in August, 1638, for the fare and transportation of two families only in the company's ships, the whole of which amounted to £1,412 12s. currency!" The account in question may be found in Alb. Rec. I., 36, and whoever will examine it cannot but be struck by the inconceivable tissue of mistakes into which Mr. B. has fallen in the above short note. In the first place, the account was not presented by Gov. Van Twiller, but by "Charles Melyn, merchant," a name familiar to all who are conversant with the annals of the New Netherlands. The bill was for transporting twelve persons, i. e. four men, two women, four children, and two servants. It amounted to 1413 florins, not "pounds," equal to about $566, or £226 currency! "I cannot help half suspecting," adds Mr. B. "that there must have been something more than fare in this account." Certainly there was. 1000 florins were for freight of horses, and 21 florins for three tons of beans, leaving 392 florins for the expenses of the men, women and children. Had Mr. B. turned to §1 of the charter, before he quoted this account as a sample of "the heavy expense of planting a colony," he would have seen that the company had fixed the price of passage and provisions in their ships, at 12 stivers per diem in the cabin, and 6 stivers in the steerage, which certainly was not so very high. These expenses, though defrayed in the first instance by the Patroon, formed a charge or debt against the respective colonists, which they were obliged to liquidate by their labor in the service of those at whose order they were brought out.

In 1641, the charge was 8 stivers per diem, in private ships. I met with a fragment of a promissory note or contract, in Alb. Rec. iii. 6, by which Mr. V. R. was bound to pay gl. 141, for the fare of ten persons, (named,) for 126 days, i. e. from 23d July, when they embarked in Holland, to the 29th Nov., 1641, the date of their arrival at New Amsterdam, at the rate of 8 stivers per diem for each person. This continued to be the rate of passage afterwards. iv. 49, 64.

* Alb. Rec. i. 90; ii. 2.

† Short account of the Maquas, [Mohawk] Indians in the New Netherlands, Anno 1644; in Hazard i. 523.

ual who filled the joint offices of Sheriff and Attorney-General to his young plantation.

Adriaen Van der Donck, the person alluded to, enjoys the distinction of having been the first lawyer in the New Netherlands. He was educated at the University of Leyden, and after having received the degree of Doctor of Laws, was admitted to the bar by the Supreme Court of Holland. He passed over to this country in 1642, in the month of November, of which year, we find him acting as Sheriff of Rensselaerwyck.*

The point at which Van Rensselaer took his station, had been the head quarters of the fur trade for many years, and numbers of traders had, in consequence, collected around the company's posts. Owing to his quarrels with the English, and his wars with the savage tribes, Governor Kieft was unable to keep Fort Orange sufficiently supplied with merchandize necessary for the Indian trade, and with a little exertion the Patroon easily seized on the business.

Claiming, under the § 15th of the charter, the privilege to deal under certain conditions in furs, in such places where the company had no factories, he set up a trading house on the border of the moat of the fort,† under the protection of the guns of the latter. This he stocked with goods imported in his own ships, and suited to the wants of the Indians, with whom he forthwith opened an active barter for peltries and other produce.

The more effectually to monopolize the trade, and to exclude all from a participation therein, unless by his permission, Van Rensselaer next usurped possession of Beeren Island, situated about nine miles below Fort Orange. This place, which he dignified with the pompous title of Rensselaerstein, or Castle Rensselaer,‡ he fortified and garrisoned with a body of men whom he placed under the command of a "Waacht Miester" named Nicholas Koren, who a few years previously had been a serjeant in the company's service, from which rank he was degraded, however, having been convicted as a whoremonger and a thief.§

Having now complete command of the river, he boldly, but yet without any authority, set up a claim to "staple right," which amounted in substance to the sovereign control over the trade of the colony against all persons whatsoever, the company alone excepted.‖ He imposed a recognition of seven per cent for each beaver, and five per cent on all other goods, and compelled, by force of arms, every one navigating the river above Beeren Island, to pay a toll of five guilders, exempting the company and their property only, from this impost. In keeping with these pretensions, his Attorney-General seized, even under the guns of Fort Amsterdam, from on board a bark belonging to the Patroon, a quantity of merchandize consigned to a trader at Fort Orange, "although the duties had been paid in Holland," and sold the same on his own mere authority. Nor did the Patroon stop here. He laid claim to the homage paid only to regal authority or sovereign states, and insisted that all vessels should lower their colors when passing the stronghold of Rensselaerstein.

It was in the summer of 1644, that the Patroon thought proper, for the first time, to enforce these grave pretensions.

The yacht, the Good Hope, of which one Govert Lookermans was master, sailed from Fort Orange in the latter part of June of that year. Passing Beeren Island he was hailed, and peremptorily ordered by Koren, the commander of that post, to "lower his colors!" On being asked "For whom?" the commander replied, "For the staple right of Rensselaerwyck! The skipper refused with an oath, to lower his flag "for any individual save the Prince of Orange, and the lords his masters;" whereupon Koren fired several shots at his vessel, one of which, says the record, "perforated our princely colors" about a foot above the head of the skipper, "who kept the colors constantly in his hand."

This unwarrantable outrage created considerable excitement at Fort Amsterdam when the particulars became known. Philip de Truy, the renowned "Marshal of the New Netherlands," summoned Kooren, "Sergeant on Bear's Island," to appear immediately at Fort Amsterdam, to answer for his offence. In vain the latter pleaded that he was authorized to do so by the Patroon. He was condemned in damages, and forbidden to repeat the offence under pain of corporal punishment, and was further required to obtain his master's (Van Rensselaer's) approval of the sentence, which should be executed upon him, without fail, if that approval were not forthcoming.

This proceeding was followed in November by a strong protest from Attorney General Van Hoyghens, against the establishment on Beeren Island, which, it was peremptorily asserted, was "inconsistent with the privileges granted to Patroons and Lords of Manors." No Patroon, it was maintained, could extend his colony, by the 5th Art. of the Charter, more than four miles along the coast, or two miles on both sides of the River; yet Beeren Island was more than two miles from the limits of the Colonie. "The bold attempt to construct a fort there, which might command the river, and debar Fort Orange from the free navigation, would," it was added, "be ruinous to the interests of the Company;" Kooren, in conclusion, was emphatically forbidden "to construct any building whatever, much less any fortification out of the limits of Rensselaerwyck," and threatened with prosecution should he persist in "such lawless transactions."

But "Nicholas Kooren, commander of Rensselaerstein," was no way intimidated by the paper bullets of Governor Kieft's Attorney General. "As the Vice-Commander of the Hon. Van Rensselaer," he replied, "I call on you Cornelis Van Huyghens, Attorney-General of the New Netherlands, not to presume to oppose and frustrate my designs on Bear's Island; to defraud me in any manner or to cause me any trouble, as it has been the will of their H. M. the States Gen. and the privileged West India Company, to invest my Patroon and his heir with the right to extend and fortify his Colony and make it powerful in every respect....If you persist in so doing....I protest against the act of violence and assault committed by the Honorable Lords Majors, which I leave them to settle between them and my Hon'ble Patroon, while the undertaking has nothing else in view than to prevent the canker of freemen entering his Colonie."*

In the spirit in which this protest was drafted, did Van Rensselaer continue his encroachments and pretensions during and for some time after Kieft's administration. Neither the conviction of Kooren, nor the warning of the Attorney-General, had any effect on his policy. He steadily pursued it until, at length, claim was laid on his behalf, even to the soil on which Fort Orange stood. This, his agents contended, was built on their land, the company occupying it only by sufferance. Eventually he would not permit any person, even with the consent of the company, to reside in the neighborhood of the Fort, or to share in the fur trade, and finally questioned the authority of the Director-General and Council over Rensselaerwyck. But the details of this dispute belong more properly to another chapter.

It was not at Fort Orange alone that the interests of the West India Company suffered in consequence of the distractions brought on by the Indian Wars: the Swedes on the South river, undisturbed in their possessions since Kieft protested against Minuits in 1638, had gradually increased in number; multiplied their posts, and extended their settlements until they had occupied one side altogether of the Delaware; obtained control of the whole of the trade of that country; excluded the Dutch in a manner from all access to its waters, and finally, copying the example of the English on the Connecticut, hemmed the servants of the Company in so closely that they did not leave the latter "as much land around their fort, as could serve to make a small garden in the spring."*

John Printz, a lieutenant Colonel in the Swedish service, having been appointed Governor over these settlements, arrived in the Delaware in 1642, accompanied by three ships, and a large number of settlers, constituting the second emigration from Sweden to these parts. He was instructed by his superiors to preserve friendly relations with his Dutch neighbors; but at the same time to lay decided claim to all the country at the west side of the river, and on the east from the Cape to the Raccoon creek.

He established his residence at Tinnicum, about eleven or twelve miles below the present city of Philadelphia, where he built a small church, and erected a pretty strong fort by laying heavy hemlock logs, the one on the other. This completed, he did not delay taking the necessary steps to carry out his instructions, and to secure for his government the country and its trade. At the entrance of the river, on the eastern shore, he built a fort named Elsinburgh, which he garrisoned with a lieutenant, twelve men, and four (De Vries says eight,) twelve pounders. By these means, he effectually secured the mouth of the river; and all vessels, no matter of what nation, entering the Delaware, were obliged to lower their flags, and bring to here, until they obtained from Tinnicum, Printz's permit to proceed higher up.†

Further up the river, on the west shore, was another Sweedish post, named Fort Christina, originally constructed by Peter Minuit in 1638. It was situate about half a mile up the Minquas creek and well provisioned. This was the principal place of trade, and here the Commissary resided in charge of a magazine stocked with every description of merchandize.

Having thus secured the road to the Minquas' land, he next took possession of the Schuylkill, and on an island in this stream, erected a fort which commanded another leading avenue to the Indian country. Every other valuable point was seized on and fortified, so that finally no access to the Minquas was left open to the Dutch. The trade with these savages fell, consequently, altogether under the control of the Swedes, and the Delaware became of little value to their rivals, who maintained at Fort Nassau on the east bank of that river, a miserable trading post so badly supplied with goods that two bales of cloth and two beaver skins are said to compose the whole stock of the Commissary in charge of the post in 1645.‡

The loss experienced by the W. I. Company in consequence of Kieft thus permitting himself to be driven from this valuable district, will be more correctly estimated, when we come to know the opinions the Dutch of those days entertained of the South River. "We acknowledge freely," says Vander Donck,§ "that we are unable fully to describe the

* Alb. Rec. ii. 192. † Ibid, vii. 196.
‡ Ibid, iii. 187; iv. 46; viii. 219. § Ibid, ii. 35.
‖ "Staple right" is defined to be a privilege granted by the sovereign to the inhabitants of a certain place, to compel masters of vessels trading along their coast, to discharge their cargoes there for sale, or on failure thereof, to pay certain duties. Vander Linden's Institutes, p. 588, in Barnard, 117.

* Alb. Rec. ii. 234, 235, 263, 273, 275; iii. 187, 188, 219; iv. 46; viii. 219, 220.

* Alb. Rec. v. 10.
† When De Vries touched at South river in October, 1643, he found the Swedes had possession of many places, and built several forts. They fired at his boat from the above fort, and ordered him to strike his flag N. Y. Hist. Col. (N. S.) i. 273.
‡ Acrelius Hist. New Sweden. Alb. Rec. xvii.
§ Description of N. N. in oper. citat. 141.

value and the advantages which this river possesses, for in addition to the negotiation and trade, which are great, and not to be despised, there are fourteen navigable rivers, creeks and streams which fall into this river. Some of the same are large and boatable a great distance, and may well be named rivers, as the ordinary tides flow several miles up the same, where the waters meet and are fresh, and still remain wide and are tolerably deep. There are also many streams presenting rich and extensive vallies, which afford good situations for villages and towns. The river itself is roomy, wide, clean, clear, deep, not foul or stony, with good settings and anchorage. The tides are strong and flow up near to the falls. The land is fine and level on both sides, not too high, but above floods and freshets, except some reed land and marshes. Above the falls the river divides into two large boatable streams, which run far inland to places unknown to us. There are several fine islands in this river, with many other delightful advantages and conditions, which are estimated by those who have examined the river, and who have seen much of the world, not to be surpassed by any other river that is known. Equalling in many respects the celebrated river of the Amazons, although not in greatness, yet in advantages with which this river, and the neighboring land is favored, we would regret to lose such a jewel by the devices and hands of a few strangers"—meaning the Swedes.

To defray, in some sort, the heavy expenses which his mal-administration had entailed on the colony; as well as to replenish his exhausted treasury, Kieft had recourse to the extraordinary powers which, by the charter of 1621, the States General had conferred on the directors of the West India Company. He gave letters of marque to a number of privateers, in 1644, 5, and 6, to cruize "from here and the West India Islands, on the enemies of their High Mightinesses," who were at war with Spain. The Spanish West India trade was, in consequence, seriously damaged by these cruizers; several vessels with rich cargoes of sugar, tobacco, ebonywood and wine fell into their hands, and were brought into the port of New Amsterdam, where they and their contents were duly confiscated.*

It was about the same period, that the director general became smitten with a disease very prevalent among the first settlers on this continent, that is a disposition to dig for gold, or precious metals, whereby vast wealth may be obtained without much labor. Whether this disposition was entertained by Kieft, with a view to enrich himself, a propensity with which he had been publicly accused the year before, by one Laurens Cornelissen, or through a desire to make some valuable returns to the company, it is difficult to say. But it appears, that whilst he was employed in the year 1645, in the negotiation of a treaty of peace with the Mohawks at Rensselaerwyck, he observed an Indian interpreter painting his face after the manner of the savages. Having obtained a sample of the substance, it was found remarkably heavy, with a greasy or shining appearance. It was supposed, therefore, to be some valuable metal, and to test the correctness of this suspicion, it was subjected in a crucible to the action of a strong heat. The result of this experiment was a yield, according to Vander Donck, of "two pieces of gold, worth about three guilders."

Having come to a conclusion to keep this discovery secret—which after all did not amount to much, as the mineral was nothing more than *pyrites*—Kieft dispatched a few men, under an officer to the Berg or mountain, to which the Indian directed them, for a quantity of the supposed gold, with a bucket full of which the party returned. Several experiments were made on this, "which proved as good as the first." Some other samples, considered equally valuable, were brought afterwards in the month of August, of the same year, from a mountain "situate near the Raritan." Kieft, in his avidity to get rich, determined to explore this mountain also, and if the information were correct, to build a fort in the neighborhood. "After much trouble, expenses and diligent research," a few additional samples were obtained, "which," says the record, "yielded gold and mercury," and a party of soldiers were dispatched under an officer, further to explore the spot.

The Director-General dispatched a special messenger to Holland, by way of New-Haven, with a bag of this supposed "gold," the fruit of all these "exploring expeditions." The vessel sailed at Christmas, but the treasure never reached its destination. The ship was lost at sea, and "misfortune attended all on board."*

A feeling seems to have prevailed in Holland, whilst Kieft was thus employed, that the affairs of the New Netherlands were not managed as they should have been. Hitherto the superintendence of the colony was committed to that branch of the West India Company, called "the Department of Amsterdam." But this year (1645,) the college of XIX resolved, that its government should be vested in all the departments collectively. With this view an entirely new arrangement was entered into. It was determined, in the first place, to recal the actual Director-General, and to appoint the Honorable PETRUS STUYVESANT in his place. An estimate of the appropriation necessary for the new Director on his departure was then made, and the proportion struck of the amount which each department should contribute, the department of Amsterdam charging itself to furnish and equip two vessels, viz. the Princess and the Great Gerrit.

The execution of these projects was, notwithstanding, postponed after they were proposed. At the meeting of the XIX in Zealand, in October following, some of the departments objected to pay their share of the expenses; the administration of the affairs of the New Netherlands, was thus left undisturbed to the department of Amsterdam, and the colony to the mismanagement, for another year, of WILHELM KIEFT.†

* Alb. Rec. ii. 250, 371, vii. 3.

* Vander Donck, ut antea, 161, 162. Alb. Rec. ii. 262, 312, 318, 323.

† Alb. Rec. viii. 39, 40.

MARAH.

BY A. BILLINGS.

On, on they trod. The boundless sparkling sand
Return'd in tenfold fierceness to the brow,
The blazing radiance of the furnace sun.
No breeze blew cool and fresh. No kindly cloud
Spread its dark shadow o'er the scorching waste.
Still on they trod—the tribes of Israel,
To find the Eden of the promised gift.
By day the cloud had guided them; by night
The fiery pillar blaz'd. The waves had stood
Wall'd on each side to let them pass, then rush'd
In dashing fury on proud Pharaoh's host,
Whelming the horse and rider in the sea.
But now God seem'd to have forsaken them.
Manhood, with all its pride and courage, shook
As the sear leaf in autumn. Lovely brows
That once look'd trusting love and happiness,
Were pale and wither'd. Like consuming fire
Rag'd the strong thirst within them. From the crowd
Which march'd in broken ranks and mingling groups,
Now a shrill shriek would tell that Death had struck
Some prostrate wretch who long had struggled on
In famishing want; and now a feeble groan
Betray the spot where e'en the camel stretch'd
His quivering limbs to die. The slim, light steed,
Whose limbs seem'd made of steel, and hoofs of springs
Elastic, neigh'd in wild delirious pain,
In search of the cool wave: But still the wide
And trackless desert stretch'd away—away—
Bounded by nothing but the dazzling sky
That sparkled in the heat. The Israelite,
As his foot shrank up from the scorching sand,
And his dry tongue seem'd shrivelling to its roots,
Thought of the silvery streams and shaded groves
Of Egypt, where the winds were fragrant balm,
And where the purple grape allay'd the thirst
With its rich generous juice. And as he thought,
In tenfold terror stretch'd the scene around.
He saw his meek young wife, with fainting step,
Slow tottering at his side. Like spectres round,
Crowded his pale gaunt children, and his heart
Murmur'd in its despair, against the Lord.
Then as the mirage glitter'd bright afar,
On would he bound with a fierce shout of joy.
But as the dark trees melted, and the wave
Vanish'd from off the sand, like breath from glass,
With one wild howl of agony his form
Would droop and sink down helpless on the waste.
Thus on they pass'd, and still relief came not.
But yet, e'en yet, a few with tireless trust,
Look'd on the leader of the suffering host,
And caught new courage from his dauntless eye.
He, chosen of God, His well-belov'd, was there.
Majesty sat on his unruffled brow,
As though the uplifted soul, when it, in awe,
Breathless and solemn, felt that awful voice,
Deep thrilling its hush'd chambers on the height,
Had caught some trace, though faint and glimmering,
Of the invisible Presence. And the eye
That dazzled, sank before the "burning bush"
Which was the merest sparkle of His Brow,
Was glowing with a fire that seem'd as born
From that fierce splendor. Strong in faith and hope,
Moses still towered erect: in accents mild
Reproving those that murmur'd: lifting up
Those that had sank to die; and with his look,
Checking the shriek of madden'd blasphemy;
Reminding all, of those great mercies shower'd
Upon them by their God, and that to prayer,
His ear had ne'er been wanting. But his words
Unheeded fell, as round the sufferers look'd
And saw the gleaming desert, and above
A sky that seem'd to swim in hazy heat.
Night closed around, but with no breeze—no dew.
It seem'd as though the air had but turn'd black
To hide their sufferings from each other's eyes,
While with more stifling pressure on the breast
It lay, compressing every nostril close,
And burning down the throat, as wide the lips
Gasp'd, cracking their bloody glue. Amidst the groups,
Frequent were heard the angry snarl and crunch
Of teeth, as fiercely the hyena sprang
Upon his prostrate prey, and rent his limbs.
Whilst, as recoil'd those nearest to the scene,
They saw the darkness spotted with the eyes
Of the whole hovering pack.

The morning dawns,
As the great fiery globe within the East
Rises majestic, and the desert glows
With his long level rays: a shifting gleam
Cuts on the staring eyes of those who look'd
In mute despair upon their forward way.
Ha! is it water? quick and wild, a hope
Springs up within their hearts. Bright visions glance
Across their minds: visions of crystal lymph
Up bubbling from the sands, and sparkling through
The emerald verdure, pure and cool and sweet.
All bounded toward it. Nearer as they came
The gleam enlarged, until a fountain flash'd
Before them in the sun. Down, down they stoop'd
To quaff the liquid silver: but alas,
So bitter was the draught, their very throats,
Burning as were they in the fiery thirst,
Refused the gift; their hearts, though half consum'd,
Fainted at every effort, till the mouth,
Though cracking in baked gore, its portals clos'd
Firm to the still sought draught. Then rose the cry
Of last despair. But now the chosen one
Rears his high brow to heaven: his trembling lips
Seem burning with his prayer, whilst o'er his form
A holy deep solemnity is breath'd.
Then in the bitter depths he casts a tree,
And as in wild suspense the multitude
Gaze on the rippling fount, he bids them drink.
Again they stoop, and with one grateful shout
The desert rings. Each felt the pure sweet drops
Melting deliciously upon their tongues,
Fresh'ning their inmost being. Deep they thrust
Their lips within the balm, and laved their brows,
And laughed in their wild happiness. Grey hairs
Floated upon the ripples. Manhood's brow
Was pictur'd on them. Woman's sweeping locks
Glisten'd like gold within them. Childhood's eyes
Up glitter'd from them, as all drank deep draughts,
Crouching along the border. Grateful smiles
Ran brightening o'er the faces of the crowds,
Like sunshine o'er a scene late rob'd in gloom.
And he, the favorite servant of his God,
The instrument of that Almighty Arm,
He stood and bless'd his Master in deep prayer,
Pouring his heart in praise, whilst loud and deep,
Stirring the air, as with a mighty wind,
And sounding o'er the sands, the anthem rose
From myriad lips to Him, the King of kings,
Who can destroy and who alone can save.

[For the Northern Light.]

INSANITY.

BY WILLIS GAYLORD.

Of all the ills that beset humanity, and with their trains of disease and suffering, cast their shadows over life, there is none so much to be dreaded, there is none perhaps less understood, than insanity. In all its forms, and these are without number, a loss or derangement of intellect is always present, and a

series of actions, injurious or harmless, as the feelings prompt, are the result. Those who follow Locke in their estimate of the understanding, have defined insanity to be, reasoning correctly from erroneous premises, or erroneously from correct premises; but there are other forms of insanity, less frequent perhaps than those which would come under the foregoing classification, which seem to depend neither on reasoning from erroneous premises, or any defect of the reasoning power. For this cause, Dr. Spurzheim defined insanity to be an aberration of any mental power from the healthy state, with an inability on the part of the individual to discern this unhealthy condition, or resist it.

The causes of insanity are very various, and in some instances complicated. It may arise from diseases of the body, from excitement or anxiety of the mind, from drunkenness, or from hereditary transmission. This last cause is far from uncommon. Sometimes it attacks the immediate descendant, while in other cases it re-appears only after an interval of one or two generations. It is scarcely possible to conceive of any thing more criminal than this voluntary propagation or perpetuation of the most frightful malady of our natures; and the records of the insane asylums of this and other countries prove that this disease, in its most incurable forms, not unfrequently originates in this way. The celebrated Pinel, estimates the cases of insanity springing from moral causes, as compared with those arising from physical ones, to be in the proportion of 464 to 219. Causes connected with love, both morally and physically, produce the greatest number of cases of insanity among females; while other causes, such as derangement of business, loss of property, and too close attention to study, are the most operative on males. Insanity is rare among males or females, before the age of puberty. It rarely shows itself before the ages of from 15 to 17 years; and the liability increases with age. The proportion in which the sexes are afflicted in England, is as 13 males to 12 females; while in France, there are 14 females to 11 males. The tables of M. Esquirol, collected from all parts of the globe, make the proportion to be 38 females to 37 males.

One of the most singular facts connected with the history of insanity, is its great prevalence in the most civilized and intellectual nations; and to this cause may be traced the obligation resting on society, in such communities, to provide for this unfortunate class of beings. On this subject, a late number of the North American Review, has an excellent paper, from which the following extract is made.

"This duty of society to provide the best means for the cure of the curable, and to take kind care of the incurable, will be seen to be more imperative, if we consider that insanity is in many cases the result of imperfect, or vicious, social institutions and observances. Most writers assert, that insanity is not known among savage nations; but without admitting this to be strictly true, it cannot be denied that civilization, in its progress, is rife with causes that over-excite individuals, and result in the loss of mental equilibrium. We have hardly space to allude to all of these; but among them are revolutions, party strifes, unwise and capricious legislation, causing commercial speculations and disasters; false standards of worth and rank; undue encouragement of the propensities and passions; social rivalry; social intemperance; some passions and conventional usages; religious and political excitement. These and a variety of other causes, for which society is in fault, are productive of a large proportion of the cases of insanity, which exist in its bosom. But if to these we add the still larger number, which arise from the ignorance of the natural laws, which ignorance society should enlighten by providing proper public instruction, we can fairly lay at its door, almost all the cases of insanity that occur.

"There is, of course, some uncertainty about the proportion of the insane to the whole population in large countries; but the researches of scientific men have been sufficiently accurate for a near approximation to the truth; and from these we learn, that as a general rule, insanity is unknown among savage, and rare among barbarous nations, and that among civilized people it is most frequent, where there is, if not the highest civilization, the greatest intensity of mental action.

"In Holland, the insane in proportion to the whole population are about as..... 1 to 1233
France,..... 1 to 1000
England,..... 1 to 793
Scotland,..... 1 to 563
Norway,..... 1 to 551
New-Hampshire,..... 1 to 466
Connecticut,..... 1 to 425
Massachusetts,..... 1 to 421

"This proportion, drawn from recent authorities, may not be exact to a fraction, but we believe it to be about the true one. It would not seem at first to correspond with the difference in national character; and yet in reality it does. An incident, which in a town of France or Italy, would gather an eager animated excited crowd, would, in New-England, attract the attention of a few quiet, cold, and silent observers; but long after the former had forgotten it, the latter would be pondering it deeply, and drawing from it a subject for moralizing or speculating. The *Bourse* of Paris, and the commercial marts of other European cities will be filled with a bustling throng of agitated men, whose flashing eyes, shrill voices, and violent gesticulations would seem to indicate an intense anxiety, about some daring speculation, or some momentous enterprise; while *on change*, in State street, or Wall street, you shall see men of the same class engaged in bolder speculations, and more important enterprises, who yet are cool, and taciturn, and cautious. But follow the same groups to their evening occupations, and you will find the former enjoying a convivial dinner, or laughing at a comedy, while many of the latter are leaning their feverish heads upon their hands, and still pondering with intense thought, upon the means of carrying out their bold schemes.

"We, of the North, are called a cold-blooded people; and it may be so; but the blood rushes with the momentum, as well as the coldness of quicksilver, through our veins. We live upon the high pressure principle within, and pile on additional atmospheres of caution and reserve without, in order to prevent an explosion. Men walk the streets with measured gait and solemn aim, looking as stiff as a steamboat boiler, but, like that, perhaps, are heaving with an inward force just ready to rend them. There is no creed so comprehensive, no dogma so contracted, no scheme so wild, but cold and iron men will embrace and cherish it, with

'all the zeal
Which young and fiery converts feel.'

"They wait not until a cloud, as big as a man's hand, shall portend that it is to cover the firmament, but the very specks on their finger nails, steadily regarded, soon grow big enough to exclude every thing else from their mental horizon. Then, the general and exciting struggle for wealth, with all its exhilarating hopes, its sudden reverses, its constant fluctuations; and the more general anxiety for the good opinion of others, which twists so many into false positions, represses so many natural impulses, and gives so much care and anxiety about appearances."

The treatment of the insane has been greatly ameliorated and improved within a few years, and the chance for ultimate restoration much increased. Reason and kindness have taken the place of brute force and personal violence in their management, and the result has been most pleasing to the friends of humanity. But all of these unfortunate beings, have not yet, even in the most civilized portions of our country, been brought to participate in these advantages. The dark cloud which a shaken intellect brings over the man, is deepened in its shadows, by straight jackets, chains and dungeons. A curse to himself, and a terror and burden to his friends, he prolongs a wretched existence, and could he frame a distinct idea, would welcome death as the termination of his sufferings.

A Miss Dix—the Mrs. Fry, or rather so far as her investigation of the dungeons, or private prison houses of the insane in Massachusetts is concerned—the Howard of this country, has within the past year, made an examination of the condition of the insane in that state, visiting the noble public asylums; the county jails and poor houses; the dungeons, cells, and cellars, where the poor insane are kept in darkness and in irons, shut out from friends, and the blessed light of heaven. Her report is one of thrilling interest; revealing scenes which startle humanity, and make heaven-born pity and sympathy weep. No one can read it without coming to the conclusion that though much has been done by the States, and by Massachusetts in particular, for the insane, they have much more to do, before their whole duty to this unfortunate class of our fellow creatures has been performed.

It is a law of our natures, that when the mind is exclusively fixed for any considerable time on a single object, that object is made to assume an undue or disproportionate importance, and if this exclusive attention is continued for any length of time, insanity is the result. Sometimes the disease assumes the form of monomania, or the individual is perfectly rational on all subjects except the one to which the disease is to be traced; in other instances the result is general insanity or the prostration or the entire intellect.

In this view of the subject, it is not remarkable that in all civilized countries, a very large portion of the cases of insanity should be traceable to religious impressions. This is found to be particularly the case in those communities where civilization has far advanced, and subjects connected with religion, and the future, have their most powerful influence on the mind. It has been supposed by many, that a subject so excellent in itself, and so important in its bearings on the welfare of mankind, as the relation existing between man and his Creator, could not be reflected on too deeply, or so dwelt upon as to produce the result of insanity. But the records of insane asylums, both abroad and at home, prove that religion does not furnish an exception to the deeply agitating causes, that pursued too closely or presented injudiciously, overturn the human reason. Among some 460 patients, whose cases are recorded by Esquirol, as occurring in France, 43 were clearly the result of religious causes. In these instances, monkish austerity and penance, and the hardships and privations religious superstition enjoined on the nuns, were the most fruitful sources of this religious insanity. Of all countries, France would seem the least likely to abound in examples of religious insanity; but experience proves, that where the facts can be known, the Catholic form of christianity produces among its votaries, all the shades and aberrations of intellect, produced among the enthusiastic or the misguided elsewhere.

Perhaps there is no part of the world, where the influences of religion are more extensively diffused, or have a more powerful effect in moulding the feelings and conduct of the great mass of the people, than in the United States; consequently the connection between those forms of insanity which arise from undue excitement of the mind on this topic, can be more satisfactorily examined and ascertained here, than elsewhere. On this point the reports of our insane asylums furnish most conclusive evidence, and matter for profound reflection. It appears that some years are altogether more productive of cases of insanity, springing from religious causes, than others; and that those years in which the public mind is most excited by religious movements, or agitated by questions of speculative religous importance, are those in which such cases oftenest occur. These facts have been urged as evidence against the excellence of religion, but most unjustly. The soothing and tranquilizing influences of the religion of the Bible, when exhibited divested of all its speculative or over-exciting adjuncts, are beautifully seen in the power which it excites over the very unfortunates which its injudicious presentation has created, when brought to bear in the family of the keeper or the superintendent. Religion is truly the medicine of the mind; in itself it purifies and elevates; but when the laws that regulate the intellect are transgressed, when religion is exhibited in a crude and imperfect form, it would be absurd to suppose the natural results of such a transgression should not ensue.

The year 1842, has seen an unusual increase in the cases of insanity, arising from religious impressions, or undue excitement, in the New-England States. Two causes have contributed to this. The introduction or spread of Mormonism; and the still more agitating prevalence of Millerism, or the belief of the speedy consummation of all things. That a belief of the principles of interpretation adopted by Mr. Miller, should produce its natural fruits of excessive agitation on the one hand, or long continued and intense investigation on the other, among those whose faith in the Bible, as the word of God, is unshaken, is not surprising; nor is it wonderful that feelings, such as this belief and these investigations are calculated to create, should have produced their natural effect in shaking the intellect of many.

As an instance in proof of what is here stated, the following extract is taken from the report of Dr. Ray, the Superintendent of the Insane Hospital at Augusta, Maine. "Of the 87 cases admitted into the Hospital the past year, 13 were attributed, with as much certainty as can ever be obtained on this subject, to religious excitement; not to mention a few in which this cause contributed its share with others in developing the disease." Ten or twelve patients have also been received at the Asylum at Concord, N. H., whose insanity could be clearly traced to the same source. The reports of the other N. E. Asylums I have not examined; but as the same causes have been, and are still extensively active, there is no reason to doubt that the same results have ensued either in a greater or less degree.

That some classes of men, or rather varieties of the human race, are more subject to attacks of insanity than others, official returns fully demonstrate. The blacks of the United States are an instance precisely in point. The census of the U. S. has disclosed a mass of facts, which have a direct bearing on this subject, and one well calculated to cause all reflecting men to ponder well the influence of freedom or slavery in all its bearings. The number of insane persons is far greater among negroes or colored people than among whites; and of the blacks, the num-

ber of insane is far greater among the negroes that are free, than among the slaves. The exact difference I am not now able to state, but it is such as to show that the cares and excitement, consequent on freedom, produce their natural effect, while the condition of the slaves in their state of barbarism, is another proof of the correctness of the opinion advanced in a previous part of this paper, that the nearer the approach of man to the state of the savage, the more perfect his exemption from the horrors of insanity.

Otisco, Onondaga Co., N. Y.

[For the Northern Light]

ASPECTS OF THE AGE.

BY S. S. RANDALL.

WHILE, to a superficial observer of passing events, there may appear little to warrant that faith in the gradual elevation and improvement of humanity, which constitutes the fundamental principle of Christian civilization, a closer inspection of the "signs of the times" will, it is believed, develop much to sustain the hopes and invigorate the exertions of the philanthropist and the reformer. Viewed upon its surface, the world indeed presents, in the midst of the civilization of the nineteenth century, much the same aspect as it exhibited in the earliest stages of the race. Violence and fraud, oppression and persecution, physical and mental suffering, poverty, desolation, pain and misery, still abound wherever the abodes of man exist: And the indestructible seeds of goodness, and virtue, and truth, sown in every age, have never been able so widely to germinate and expand, as to secure for themselves a genial and unrestricted development of their fruits—much less to expel from the haunts of humanity the noxious and destructive weeds of error, and ignorance, and vice. The great truths and sublime teachings of Christianity —the illustrations and exemplifications of that perfect ideal to which we are commanded to aspire, have been but feebly and imperfectly comprehended; too rarely adopted and followed in earnestness and entire sincerity and devotion of purpose; and never adequately realized in the life, even of the best. Now, as in all preceding periods of man's history, the great objects and purposes of human existence are almost universally overlooked or disregarded; the value, the capacities, and the destination of the immortal mind, unappreciated; and life, with all its momentous interests and solemn realities, converted into an empty, illusory and unsatisfying pageant —a fleeting but painful and feverish dream. Under the influence of perverted and erroneous views, and the predominance of selfish and vicious propensities, the vast machinery of society, throughout all its wide spread ramifications, has been constructed upon principles radically false and defective; and the movement of its complicated wheels is constantly and inevitably crushing the fairest hopes of humanity; pressing to the earth the great, the good, the virtuous and the wise, and elevating to the surface the unworthy and the base. True greatness, unaffected and unassuming goodness and worth, sterling integrity, truth, rectitude of purpose, and elevation of life, must now, as ever heretofore, count upon frowns and persecution, inveterate hostility and relentless proscription. It is, indeed, melancholy to contemplate the spectacle which the pages of the past history of the race have uniformly presented, in this respect. Slowly as civilization and science and moral and religious truth have advanced, every step has been marked by outrage, and violence, and bloodshed; and each successive victory over error and delusion has been achieved at the expense of a fearful sacrifice. So firmly and strongly moored have been the fastenings of that huge fabric of an ill-constructed social organization, sustained and perpetuated by an ever-recurring combination of the lowest propensities of our nature, that we blindly and almost instinctively rush with an united and overwhelming strength to crush the daring innovator, who seeks so to remodel any of its dilapidated machinery, as to adapt it to the permanent well-being of those for whom it was designed. And with a strange inconsistency, we still persist, age after age, in "garnishing the sepulchres" of those whom we, it is greatly to be apprehended, should be no less ready than were our fathers, to persecute and to slay, for the self-same devotion to principle and nobleness of purpose, which procured for them the martyr's doom.

But it is impossible, in the nature of things and the ordination of Providence, for this state of things to be perpetual. The world is yet in its infancy; and although centuries may pass away, and probably are destined to elapse before the eternal principles of truth and justice shall be universally recognized as the rule and guide of action, those principles must ultimately prevail. There are unequivocal indications in the present aspect of civilized society throughout the world, of a fermentation of the elements of a great and radical change, not merely in the social, but in the political, moral and religious economy of mankind; a change, too, not to be effected by a sudden and violent revolution, physical or mental, but destined to be accomplished, if at all, by the slow, but certain, progress of increasing knowledge, the irresistible force of truth, when clearly and distinctly perceived, and the co-operation of the great and the good of every clime, and of every different hue of faith, religious or political. Among these indications, the following are the most conspicuous:

1. A more general appreciation and adoption of the fundamental truths and pure doctrines of christianity. The "middle wall of partition" which ignorance and fanaticism have, for so many ages, erected between a sound and rational philosophy and the religion of the Bible, has now been substantially demolished; and as knowledge and civilization advance, science is recognized as the legitimate handmaid and the efficient auxiliary of christianity. Intellectual and moral philosophy, as expounded in the best schools of Germany, France and England, as well as in our own country, plants itself upon christianity as its only rational and secure basis; and the illustrations and expositions of the latter, instead of being committed to the keeping of theological disputants and controversial schools of divinity, now task the cultivated intellects and exercise the enlightened faculties of the most powerful metaphysicians, and the most profound scholars and thinkers of the civilized world. It may safely be affirmed, that no healthy mind of ordinary understanding, free from prejudice, passion and interest, can resist the accumulated force of the external and internal evidences upon which the christian religion is based; and when the sublime teachings, the pure morality, the high and elevated consolations, hopes and prospects of that religion, shall be commended to the great mass of mankind, free from the admixture of controverted creeds of man's invention, of sectarian intolerance and bigotry and fierce denunciation— when the GREAT TEACHER shall be recognized as the Friend and Brother, as well as the Saviour and Redeemer of the human family—and his religion as the guide and renovator of the life, and the standard of morals and excellence, as well as the rule of faith —we may reasonably anticipate results of the greatest magnitude to the well-being of the race, from the universal dissemination of christian civilization. Resting upon the immutable basis of love to God and love to man, requiring for its perfect development, universal charity, tolerance and good will, and announcing as its cardinal truth that "God is a Spirit, and they that worship him must worship him in spirit and in truth;" it at the same time proclaims that "in every nation he that feareth Him and worketh righteousness is accepted with Him," without regard to persons, creeds, or sects.

2. An evident and increasing disinclination on the part of the great powers of Christendom to resort to arms for the settlement of controverted claims, or for conquest. The only apparent exception to this fact, is the recent attack of England upon China, and the present attitude of that power in reference to India. The exception will, however, be found to be apparent only, inasmuch as public opinion has, so far as the prevailing tone of the English press of all parties may be regarded as the index of public opinion, withheld its sanction from both of these vast and unjustifiable projects of dominion and conquest. A quarter of a century has scarcely elapsed since a deprecation of the inevitable calamities even of defensive war, would have been loudly and fiercely denounced as not only weak, but wicked and treasonable. Now, however, the pacific adjustment, by negotiation, or otherwise, of all questions at issue between our own and other countries, is regarded with rare exceptions as not only practicable under almost every conceivable contingency, but as the only rational mode of determining controversies between nations; and nothing but an obstinate and irreclaimable persistency in offensive measures, indicating a determination to disregard the well-grounded claims of national interest or honor, would now be considered as a justifiable pretext for a declaration of war.

3. A more just estimate and appreciation of true greatness; an increased disposition to venerate the memory of the true benefactors of the race, and to detract from the respect heretofore but too generally paid to the mere warrior, to the successful, though unprincipled aspirant to power or station, and to wealth, title, or birth, without regard to merit. In our own country, and within comparatively a brief period, we have frequently been called upon to witness a generous out-burst of popular feeling pervading the length and breadth of the land, as a spontaneous and irrepressible homage to moral virtue and worth, divested of all the trappings of station, wealth or extraneous circumstances; and instances are by no means rare or extraordinary, where this unbought homage to excellence of character has broken through all the strong restraints of long cherished political antipathies and partisan feelings. It was a remark, if we mistake not, of the late lamented Dr. CHANNING, that in the progress of civilization, a period was rapidly arriving when mind was destined to exercise a far deeper and wider influence upon the fortunes of nations and of the individuals composing them, than rank and official station, however dignified or exalted; and, perhaps, no stronger or more decisive illustration of the justice and truth of the remark could be furnished, than the wide spread influence which, it cannot be doubted, his own eloquent pen and blameless life will have exerted upon the minds and lives of his countrymen. We all remember the heart-felt tribute of public sympathy which gathered around the premature tombs of the gifted SPURZHEIM and FOLLEN—foreigners both —and both, comparatively, strangers—sojourning among us for a brief period only—but in that brief period diffusing far and wide around them the sweet incense of irreproachable lives, devoted to the service of their fellow-men, and the acceptable worship of the Creator. Other instances, no less indicative of the prevalence of a sound public sentiment in this respect, might readily be adduced, were it necessary. The existence of such a sentiment, and its occasional manifestation, affords a cheering encouragement to the flagging hopes of the patriot, the philanthropist, and the Christian, as he stems the torrent of obloquy and reproach which he is too often destined to encounter, in his labors for the benefit of his kind.

4. The general agitation of projects for the amelioration and elevation of the condition of the laboring classes; the wide-spread interest manifested in the diffusion of useful knowledge; the systematic efforts to improve educational science; the rapid and hitherto unprecedented advancement of the arts and sciences; the important discoveries and improvements in mental and moral philosophy; and last, though not least, the various discussions as to the practicability and expediency of re-casting the entire framework of the social compact upon principles more in accordance with the advanced condition of civilization, the dictates of sound reason, and the spirit and temper of the Christian religion. Doubtless it will require a long period, under the most favorable auspices, so effectually to counteract the *vis inertiæ* of existing institutions civil and social, modes of thought and of action, consecrated by the usage of centuries, and evils apparently inherent in the body politic, as to prepare the way for the introduction of a higher and purer civilization. Nor is it undesirable, in view of the history of past attempts at reform, of the conflicting and often crude theories of philanthropists and reformers, and of the extreme fallibility of the highest human wisdom, when acting in reference to interests of such magnitude, that a strong conservative influence should be constantly circumscribing and retarding the advance of reform, even when most needed, and ultimately most inevitable. In such a movement, *festina lente* is the safest motto. But the agitation of plans for the renovation of society, and for securing the greatest amount of social and individual happiness to each of its members—for the recognition of higher standards of ambition and exertion than those which universally prevail: and for the elevation of the mass of mankind to a station from whence they may clearly discern and intelligently follow their highest interest,—must necessarily be attended with beneficial results. As knowledge and virtue become more and more widely diffused, obstacles and difficulties will vanish—the sources of error be discovered—and the path to a more advanced social civilization, rendered apparent.

5. The numerous and rapidly increasing institutions and associations for the promotion of benevolent and charitable objects, the relief of human suffering in all its forms, the mitigation of the various evils incident to the social economy, and the diffusion and advancement of a higher and nobler civilization, and a more enlightened philanthropy. Prominent among these are the voluntary associations— now embracing by means of their direct and indirect influence, by far the greater portion of the inhabitants of the civilized world—for the promotion of temperance; the various institutions for the dissemination of the Gospel, throughout our frontier settlements and among the heathen; the countless charities of every description which cause "the wilderness and the solitary places" of human destitution and wretchedness "to bud and blossom" under the fostering care of the benevolent of every name and nation; and the seminaries of public and private instruction which dot every hamlet within the vast confines of

civilization. From these numerous and variegated fountains of genuine philanthropy—inexhaustible as their source in the deep springs of the human heart—flow perennial streams of love and good will to man—fertilizing the desert places of humanity, and irrigating every portion of the rich soil of christianity.

6. We have time and space now to allude to one additional evidence only of the progress of a higher and more enduring civilization, though we are aware the subject is by no means exhausted, and that a variety of other illustrations might readily be adduced, confirmatory of a cheerful faith in human advancement. The elevation of WOMAN to her appropriate sphere in the civil and social economy—the establishment and liberal encouragement of institutions expressly devoted to female education—and the prevalence of a more adequate appreciation of the noble mission which is reserved to woman in the advancement of christianity and the diffusion of knowledge—afford a sure indication of an enlightened and progressive civilization. The results of these sentiments and measures are around us in every form. Foremost in every effort to ameliorate the sufferings and calamities of humanity—prompt to perceive and ready to embrace every opportunity for the promotion of sound knowledge and true virtue—as teachers, as friends, in all the relations of the social state, and in every department of life, the influence of woman is felt, and her exertions are perceived—elevating, improving, refining and softening mankind, and introducing a higher and purer civilization, founded upon the best affections of the human heart.

[For the Northern Light.]

QUEEN MARY'S MUSINGS.

BY MRS. LYDIA JANE PIERSON.

When will the morning dawn? And yet to me
What will avail the dawning? Wearily
My days creep on, weaving with tardy hands
Tissues of idle hopes, but the dim night
Gathers around so many memories,
Like dark and hideous spirits muttering
Legends of all that I have lost; of all
That I have been; of all that I have lov'd;
Of treachery, falsehood, agony, and shame,
Sitting like mocking spectres on the graves
Of all my perish'd joys.

Year after year
Creep by my prison walls, and bring no change,
Except a deeper curtain of green moss
Unto the cold stone wall, and heavy arch
Of this detested tomb. There is no hope,
No smiling hope for me. 'Tis now gay spring;
The Lord has written on each vale and hill
In bright rich colors, balmy fresh from heaven,
Fair promises of plenty, wealth, and joy.
The lowliest heart that beats in God's free air
Is glad, and sings of gratitude and hope.
But I, who by the light, men call divine,
Am mistress of a kingdom. I, whose heart
Should feel the glow of a whole nation's hopes,
And garner all its joys. I, who should be
Free as the wind on my own mountain tops,
And every where at home in freemen's hearts,
Am lingering here an outcast from my own,
A captive in the toils of treachery.
Deserted by a nation whom I love;
Betray'd by one on whom I lean'd for aid;
Heart-wrung, insulted, tortur'd with all wrongs,
That misery marshals in her catalogue,
When she would break the heart.

Tears! burning tears!
Well, let them flow; there are none here to mock
The wounded spirit's cruel agony.
Oh, there is balm in tears. How sweet they gush
From the deep fountains of a broken heart,
Relieving it, and falling like soft dew
Upon the withered spirit, when it lies
Wounded and scath'd like a poor trampled flower
Which ne'er shall lift its head from the cold earth,
Or shake the dust from off its velvet robes;
On which the careless passer sets his foot
While he adores a far inferior bloom
That rests in pride on her imperial stem
And scorns her injur'd sister.

Oh that sleep
Would lay her soft hand on my weary eyes,
And shut out this bleak world: That I might dwell
A little while with loving memories,
Unhaunted by the never ceasing knell
Of death, and change. Oh let me see once more,
The vine-encumber'd hills of sunny France,
Where the gay gatherers of the purple fruit,
Make labor joyful with glad melodies
Of gratitude and love.

Oh give me back
The royal halls, where sweeping tapestries
Of purple velvet, and rich azure silk
Vied with the Fleur de lis—the pride of France;
Beneath the shade of which my girlhood pass'd
Like a bright dream of Eden with its bowers,
Song birds, and angels, flow'rs and living springs,
And never failing fruit. All circled in
With the rich radiance of immortal love.
My weary spirit ever turns to France,
When it would dwell with blessed memories;
For there, beneath its royal lilies, pass'd
The only happy period of my life.
A broken flower, I was untimely riven
And thrown upon a swiftly passing stream,
Which bore me onward, while unconsciously
I danc'd, and smil'd; while the bright sun look'd down
Upon the waters, and the shady shores
Shook out their fragrant garlands, and pour'd forth
Soft gushes of delightful harmony,
To which the pure waves, as they kiss'd the beach,
Murmur'd a fond response.

Such was my life
Among the hopes and joys and loves of France.
Then hundreds of brave hearts throbb'd quick and high
For Mary, princess royal of rich France,
Queen of fair Scotland, and acknowledg'd heir
To England's diadem. Then myriad swords
Leap'd flashing from their scabbards, at the call
Of Scotland's Mary; for high chivalry
Sought for no richer altar under heaven,
On which to pour its blood than Mary's cause.
Fairest of all the fair was Mary then;
Empress of every elegance and grace
That gems a lady's chaplet.

Then my breast
Lock'd in its treasury the noble heart
Of the young kingly Francis. Oh 'twas bliss
To feel the throbbing of that royal heart
Amongst my life strings, thrilling each to bliss,
The perfect bliss of young and holy love,
That lies upon the spirit, as the dew
Lies pure and trembling in the fragrant heart
Of a fresh virgin rose; which clasps it there,
Folding around it all her loveliness,
Her softness, and her fragrance.

Give me back
The bliss of one bright morning, when all France
Gave up one joyous pæan. When her hills
And vales, and streams, and cities, all were glad
And crowned with bridal garlands. When the hearts
Of all the young and guileless danc'd with joy.
And even sorrow put aside her veil,
And watch'd the general gladness till she smil'd.
The myriad hearted city felt one tide
Of rapture moving every sentient pulse,
And from the royal palace to the cot,
Was all alive with joy. In one young breast
Liv'd deep and still the spring of all the bliss
That flooded this broad land. I was a bride!
The love that was my life was crown'd and blest.
I was a royal bride, and earth had nought
That I had cause to covet. All was heaven
Around, above, within me. Was there one
Who could have augur'd from that glorious morn,
A day of mourning, blackness, and despair,
Captivity, and shame? But storms arose;
The limpid stream grew black, and rush'd along
A swol'n and angry torrent, with loud roar,
Lashing the rocky banks, and hurrying on
Through dark and thorny deserts, where fierce beasts
And treacherous serpents hold their hideous reign,
And the poor flower was dash'd from rock to rock,
Mangled and soil'd and shivering. Now they come!
The dark and adverse days; a horrid train,
Hurrying along to strange, discordant sounds,
Woven with death knells, groans, and taunting words,
Into a fearful march. My shuddering soul
Shrinks from the haggard spectres as they pass.
Oh! here are agonies that well might wring
The warrior's iron heart, till the red blood
Gush'd from the bursting portal Every ill
That woman's heart has known since time began,
Has fallen upon mine. My infant eyes
Open'd on death and mourning, and the sigh
Of widowhood from my 'lorn mother's heart
Was my first lullaby. And then I learn'd
To dwell, a little exile from my home,
And seek with humid eyes from stranger hearts,
The blessed gushings of a mother's love,
And turn aside and weep.

Young widowhood,
With its wild sobbing grief—its long, lone nights,
And dark and cheerless mornings, has been mine.
Then on the urn that held my ruin'd joys
Was laid my broken crown.

I, too, have drank
That bitterest of all cups, ingratitude—
Hatred, and wrong, and scorn, and vile abuse
From those I lov'd and trusted. I have been
The poor neglected wife, who weeps by night,
While memory repeats fond words of love,
Sweet promises, and softly whisper'd hopes
That all were breath'd in vain, and now are thrown
With bitter scorn back on the wither'd heart
Which gave them as rich treasures.

Deep and keen
My quivering heart has felt the barbed shaft
Of cruel treatment from an only child,
For whom I could lay down my very life.
His youthful mind is poison'd by the streams
That gush from the foul hearts of my fell foes,
And falling constantly upon his heart,
Have petrified the springs of filial love,
So that his eye and voice are icy cold,
And his ear callous. Oh, 'tis agony
To feel that he has power to break my chain
And punish mine oppressors, while I groan
And pray in vain for aid. Oh, misery,
How fast the dark groups gather! Let me hide
From those vindictive, cold and treacherous eyes;
Vindictively they low'r on every side,
And mutterings of vile things, the very thought
Of which is ignominy, taint the air,
From lips that writhe with hatred. Oh great Lord,
Thou know'st I never did such horrid deeds
As these accuse me of! I am a queen.
I could not act dishonor. I have been
In some things weak, in many things abus'd,
In all misrepresented Above all,
Wrong'd and betray'd. Deserted by mine own—
Held in vile durance to a dotard's lust,
Even in mine own Scotland. Oh, my God!
How I have writh'd, and wept, and agoniz'd,
While men accus'd me of hypocrisy,
And left me to my anguish. All my woes
Were wrought and color'd by a woman's hand,
Whose envious spirit since my reign began,
Has been my evil genius. Strange it seems
That woman's heart can be transform'd by pride,
To such a tissue of unlovely thoughts
Toward a hapless sister. Could our fate
Have been revers'd, the Lord of mercy knows
That queen Elizabeth had never lain
A prisoner all these years in Mary's realm.
Oh no! I would have rais'd the drooping head,
And sooth'd the troubled spirit. It had been
My bliss to have restor'd her to my rights.
How can Elizabeth, the great, the wise,
The royal hearted, manly spirited,
Suffer base jealousy and low revenge
Thus to obscure the lustre of a name,
Which, through all time, must stand in history,
Last on the record of a race of kings,
That, with her death, becomes extinct? The thought
That Mary has a son, on whom the eyes
Of England rest in hope, adds bitterness
To all the venom that she lavishes
On my devoted head. Yet if she knew
How like a burning coal, deep in my heart,
Lies that most holy word maternity!
Her heart might triumph with a fiendish joy,
In having poison'd thus the sweetest spring
Of human happiness. My son! my son!
How is it possible that thy young heart
Could heed the whispers of malevolence,
And close against thy mother, unto whom
Thou art sole joy and pride? It is for thee
That I endure this long captivity,
And wear a crown to me all valueless,
Guarding its rights, with most religious care,
That of its honors not a single leaf
Should wither, or be wanting, when it lies
Upon my coffin, thence to be remov'd
To shed its august glories on thy brow.
God grant it may sit easier on thy head
Than e'er it sat on mine. Thistle and rose
Compose its wreath, and I have worn the thorns
All next my bleeding temples. Yet be sure
That I have rifled it of no one gem,
Nor shalt thou find a stain upon its gold,
Except it be my blood.

Hark! the dull chime
Peals out the matin hour. Oh, to my soul
How sweet the soothing that religion brings
In her rich offices! The holy church
Has not cast off her daughter; still she gives
Peace, hope, and consolation, and her hand
Lifts the dark scenery of the stage of life,
And points me to that pure and happy land,
In which the weary find eternal rest.
Let me compose my thoughts, and offer up
My morning hymn to the mild queen of heaven.

Ave Maria! Maiden all divine,
Thou purest of the virgin host of heaven:
No sin, no passion stain'd that heart of thine
Which, yet, was with the sword of anguish riven.

Ave Maria! Pity me I pray,
Who am of womankind the most opprest;
Thou seest how all the floods of misery
Roll their black billows, surging o'er my breast.

Ave Maria! Free from guilt thou art,
Yet thou canst pity sinful ones like me;
Look how regret is gnawing at my heart,
While sad repentance pours her sorrows free.

Ave Maria! Most exalted one,
From thy high throne look on my captive thrall;
And O, for me entreat thy Mighty Son,
Whose heart of holy pity melts for all.

Ave Maria! Ask of Him for me,
Humility of soul, and His sweet peace;
But most of all, a resting place with thee,
When the wild throbs of this wrung heart shall cease.

Ave Maria! Hear a mother's prayer,
And supplicate thy royal Son, for mine,
That he his crown may well and wisely wear,
Thus earning for himself a crown divine.

Ave Maria! Listen, while I pray,
And o'er my soul thy blessed spirit breathe;
Oh, intercede at heaven's high throne for me,
And shield and comfort me in life and death.

[For the Northern Light.]

A WALK NEAR ALBANY.

BY ALFRED B. STREET.

A bright afternoon in August! There was a heavy mist in the early morning, but it lifted as the sun ascended higher, and has left nothing but an almost imperceptible haze in the air, glimmering before woods and hill sides. The sky is of the tenderest blue, and a fitful breathing from the north, tempers the glow of the sunshine. How the city seems steeped in heat, how the pavements sparkle, and how close and confined the element called by way of a joke, air! Away then from this oven in which so many human beings are slowly baking, and let us feel the soft grass under our foot, and the free atmosphere upon our brow. How far the oven stretches in the shape of this long narrow street! but, thank fortune, it is passed—we cross the railway, and fields and hills dotted with trees are on our right, and the bright river, with its armlet, enclosing a smooth, flat island on the left. What a beautiful water perspective the creek shows, here, at the top of the hillock in the road, a fringe of trees upon each side, mostly elms whose tops droop like plumes, while the water seems a plain of dark glass! A boat is crossing in line with that low tree-shaded cottage upon the island-bank, towards the shore—while farther to the left the topsail of a sloop is gliding slowly along as though borne upon the air, for the river here is hidden. But we will not linger, for we have a mile of dust to travel over before we turn, and the sun does scorch a little, although we are free from the city. The meadows have been shorn, and are smooth with the velvet nap of the second growth—the grain fields have lost their golden billows, but are still bright with the tint of the stubble—and on each side the eye ranges delightfully. We trudge by "Cherry Hill"; the beautiful grounds of "Mount Hope" crested by its fine mansion; we see over the wood the turrets and gables of the charming new cottage, and passing through the toll-gate, we soon arrived at our diverging point to the right. We ascend—a road winds downward, and the Norman's Kill is before us. I am bound in justice to say that the water is rather muddy; but, glancing here in the sun, and there darkened by the shadow cast from that high wooded hill, it is not to be by any means despised. To be sure, a comparison will intrude itself between it and a little naiad I know of in Sullivan, whose crystal shape is so closely wrapped in a green mantle that you would not know of her existence save by the occasional sparkle of her eye; but under the scorching argument the sun is continually pouring, we will conclude to "get what we can" in the way of streams. So we let the eye cool itself upon it, and then we will pass upward to the rapids, whose rush has been in our ear since we left the upper banks. The falls seem as if issuing from the horizon, which rests like a wall upon the upper part of the slope of rocks. Slope of rocks, truly. The whole channel is one chaotic mass of fragments; and between them the waters are rushing, boiling, foaming, gliding, falling with as many different tones as there are currents. The sunshine bathes the whole scene, and the effect is superb.—Fringes of glittering silver—sheets of the clearest amber—foam bells and bursting bubbles, all flash upon the sight in a picture of magical beauty. The ravine too, in which the "falls of the Norman's Kill" are, is wild and picturesque. High banks at either hand. The southern side a low mountain thick with foliage; pointed hemlocks, dark blue pines, oaks and maples. The comparative light tints of the latter blend charmingly with the deep shades of the former. The wolf's howl issues at midnight from haunts not darker or denser than that towering hill.

There is a precipice opposite that falls sheer to the blackest looking basin of water I've seen out of the Mongaup.—It is just out of the reach of the commotion caused by a mimic cascade, but occasionally a bubble or two shoots in, and after eddying round a moment, joins a mass of froth at one side and blends with it. There is a rocky eminence between the basin or pool and the main channel; that is, one or two rather large rocks, which have collected a little soil, from which a few bushes and one gnarled tree have grown. The little islet seems to have slid down the slope and accidentally anchored there. It is only noticed from the precipice, for on the side where we now are it does not appear as an island, but merely a part of the main shore. This precipice is the side of a high knoll of pines. The ground is covered with the withered fringes, which polish the soles of your feet-apparatus so smoothly that you walk in rather a slippery manner. However, should you happen to be on this side of the stream and wish to cross over, all you have to do is to slip down the precipice, otter fashion, and then be careful to reach a small strip of earth that edges the basin. Thence to the islet is a somewhat precarious way, but once reaching there, your path across the stream is easy. It is merely stepping from one rock to another. This, remember, is at low water, for in the spring freshets I can imagine the turmoil of the waters swollen into rage, tearing down the channel, lashing the rocks, flinging spray around like showers of snow flakes, and roaring in such a manner as to present a strange contrast to its present summer song. The Norman's Kill is a prominent feature in the early history of Albany. It was the second bivouac-place of Christianse and his followers. First, the flat island before spoken of, stretching from Cherry Hill to the mouth of this stream, was the spot where their fort was erected; but the ice-freshets of spring drove them off. The Hudson was as unmanageable then as now, and how it is occasionally, let the Quay-street merchant tell. However, the fort was abandoned, and another erected upon the high banks of this stream. It was a trading post, to which the neighboring Indians (the Mohawks and Mahikanders) resorted to barter their beaver skins for trinkets. There are a number of legends hanging about that period of Albany history, and several connected too with this stream, which I intend some day to shape and give a tongue to. But every thing in its season. At present I am engaged in a walk. Well, let us proceed then. There is a path winding along between the stream and the north bank which keeps the foot dry. There are but few flowers in August; however, here and there a lingering briar-rose shows itself, and the wild sunflowers are scattered over the cliffs and fissures of the banks like spots of gold. The aster is preparing to display its many varieties of shape and tint, and the golden-rod is beginning to curl over. A week or two later, and the last will be in a blaze of yellow, while the aster in clumps, groups and single stalks will smile with its opened eyes upon every hand. We have reached now the point where we ascend. A toilsome struggle, and the top of the bank is won. A little grasping of roots, digging the heels into the yielding soil, and pulling upon boughs suffice to raise us to the summit. We look between the stems of the pines and oaks, and the gorge is seen with the stream hurrying down at the bottom There is a saw-mill upon a little shelf of level ground, between the stream and the steep northern bank, with a low dwelling by its side. They look quite picturesque. The chimney of the latter seems to nestle into the branches of that lofty hemlock. The acorns and nuts will rattle upon the roofs in October, from the boughs above, like hail showers. The pine-cones drop upon them now. How cool and pleasant it is here! the very spot to lie and slumber. But we must pass on. So we skirt the banks, until, descending, we come to the margin of the stream, and following the path made probably by the cattle, through the thickets, we emerge suddenly into a field. The northern slope of *Kiddenhooghten* is before us, parceled into meadow and grain field. The latter is studded with stacks, amongst which a huge wagon is slowly moving, collecting them. The sunshine flashes upon the iron implements used by the brawny laborers who seem to defy the heats of an August afternoon. After a short "resting spell" upon the soft, green sward, we again proceed upon our way.

There is a solitary farm house at the left and an orchard beyond. The ground has the shape of a shallow basin. The slopes on all sides are gradual, and there is here and there a tree within the basin which is covered with a carpet of the greenest grass. The scene has all the sweetness and repose of rural life. It is difficult to realise, sleeping as it now is in the golden calm of this summer afternoon, that it ever knew a tempest; that the blast ever howled over it, or the rain and snow ever beat upon it. But like every thing in life, this beautiful scene has its dark aspects.

We ascend the western eminence to the edge of the woods, and then follow a cattle-path to the left, which, in a few moments, brings us to the opposite side of the ridge, down which the path winds through thickets and around bushes. Ha! a rabbit! How he "streaks it" through the under brush. Here is his temporary bush-house—a seat of dry leaves, with a thick branch overhead; and what have we here? a shelving cavity, hollowed out amidst the wreathed roots of a pine tree. This is the cave of the woodchuck. A special object of favor or hatred to the truant school-boy, who will stand by the mouth of the slanting hole and "poke" with a long stick by the half hour. If there is a little snarling, good for nothing cur in company, the antics he will cut at the entrance, are sufficient to plant broad grins on the face of a stoic. Yelping, whisking his tail and trembling all over—now thrusting his snout and shoulders into the cavity, and scratching out the earth, with all his feet in motion, as though dancing on hot iron, he presents the most ludicrous picture imaginable. And the boy, too, thinking he has, indeed, found a "mare's nest," he is by, hopping from one leg to the other, clapping his hands, and encouraging the dog with his cries, whilst all the time the marmot is quietly engaged some distance off, out of sight and hearing, in finding his afternoon supper. We tread down the path—the grassy channel of a dried up brook, with its minute promontories and fairy bays, and willow-clumps upon its margin, winds up at our left—whilst the slope at our right is covered with dense bushes. The green shoulder of a hill heaves up right at the spot where the sun is about to sink. A ridge of misty blue along the western horizon proclaims the "Helderbergs," whilst the great fiery orb, with blaze so softened as almost to permit the eye to rest upon it, is dropping down until there is but a small stripe of sky between its lower rim and the mountains. There is a rich halo around the orb, extending deep into the summit of the ridge, as if the gold had consumed a half circle of the azure. One solitary bar of cloud is above the sun, as though it came there to attend the setting. Majestically the huge blazing globe descends—its lower half is merged, and now a strip of intense brightness glows upon the mountain summit—that, too, is lost, and the whole west is in a blaze. The solitary cloud burns in the splendor like a gigantic ingot of gold in a furnace, whilst even the eastern wall of the horizon does its honors in the pageant, by showing at its base a bright tint of pink. Rich crimson has succeeded to the gold upon the cloud, and the blaze of the west has changed into deep orange, shading up into bright green, which in turn melts into a beautiful pearly gray—and behold through the glory, the snowy crescent of the new moon. Talk about the sunsets of Italy, indeed! I question whether a lovelier ever gleamed even in her skies, over *Firenze la bella*. It is in the peculiar beauty, too, of Italian sunsets. England may well expatiate amidst her fogs upon the enchantment of those southern skies; but we here, in America, know better than to go crazy about them, for nature has dealt her varied beauties too liberally to us for that. However, comparisons are "oderous."

There is a forest-path of a short-half mile, leading up hill, and the spires of the city are again seen. How exquisitely fragrant is the air! we breathe nothing but coolness and perfume. There is a gray shade in the woods as we ascend, and at length we come to the upland fields. The low farm-house is at our left, with a wagon track leading to it through the meadow. A well of the sweetest water is before the house, with a bucket spotted all over with green fresh moss. The farm-track leads out into a grass-margined road, which intersects the highway at "White Hall." Twilight is setting all objects swimming around us, as we turn our faces towards the city, and several large stars have commenced winking over head. A few minutes bring us to the "railroad," we descend the hill, cross the stone bridge near "Buttermilk Falls," mount the opposite slope, and the brick store at the corner is before us. We are again in the city.

STANZAS.

[Selected for the Northern Light, from the writings of the late CICERO LOVERIDGE.]

Oh! who shall smooth my icy brow,
And sunken eyelids gently close?
There are but few who love me now,—
Will even one, remain of those,
To note the unregarded grave,
Where I must soon or late repose;
In burning tears its sod to lave,
Or plant with trembling hand the rose?

It is a thought to turn to bliss
The fears that lie the tomb beneath,
That we shall feel the faltering kiss,
And warm affection's deep drawn breath,
Steal softly o'er our dying cheek,
And hear the parting vow that saith,
In accents, tremulous and weak,
A soul shall cling to us in death.

Is there a heart so cold and dead
On earth, that would not wildly leap,
To know, that o'er its grassy bed,
The form it loves will bending weep,
And when all others have forgot,
Its silent vigils still shall keep,
Upon that else neglected spot,
And watch above a "dreamless sleep."

To him who, in the love of nature, holds
Communion with her visible forms, she speaks
A various language. BRYANT.

[For the Northern Light.]

ON THE INCREASE OF IRON IN ELUCIDATION OF THE QUESTION, WHETHER THIS METAL IS INEXHAUSTIBLE?

TRANSLATED BY H. B. WEBSTER.

[The following article is translated from the "Schriften der in St. Petersburg Gestifleten Russisch—Kaiserlichen Gesellchaft fur die Gesammte Mineralogie. 1. Band. 11te Abtheilung. St. Petersburg: 1842. By Dr. H. U. C. Von Roos, Counsellor of State and Knight"—recently received by the Albany Institute from Charles Cramer, Esq. of St. Petersburgh.]

I.

The use of iron by the human race in former ages was great and extensive, but in modern times its use is far more general and extensive.

II.

If we consider the application and use of this metal in its wide extent, and in ordinary life: household articles, kitchen utensils, stoves, hearths, &c., also in articles of luxury, rings, bracelets, watch-chains, medallions, &c.; if, in agriculture, all the instruments of the husbandman and vine-dresser, in the work-shops of artisans, most of the tools from the needle and shears of the tailor, to the hammer and anvil of the blacksmith; if, in architecture, the great expenditure of iron in bridges, railings for streets, gas-pipes for the illumination of cities, roofs, enclosures of courts and gardens, in churches, altars, pulpits and columns, with their entablatures and decorations, and in England, indeed, we see churches erected of cast iron; if, we consider the application of this metal in the fabrication of machines of all kinds, in ship-building in general, and especially in steam-ships, and finally the great use in war, both on land and sea, where the weapons from the largest to the smallest, arms and cannon, are of iron, where formerly for the larger balls, stones, and for the smaller, lead, now iron is used, the question becomes an interesting one, *is this metal inexhaustible?* Whether it ever could become so rare, that we should be embarrassed on that account, as they are in some countries even now, owing to the wood so necessary for its manufacture.

III.

This question is still more interesting, if we take into account the extraordinary quantity of iron, which Russia and Sweden manufacture and export; the former receives annually from the royal and private mines of Siberia four million pounds of iron for mechanical and mercantile use, exclusive of what is derived from Petrosawodsk, (which will be mentioned hereafter,) and the latter, Sweden, in the year 1824, exported 101,271 ship-pounds of bar iron to England and America, exclusive of her own consumption, and the quantity in store for future shipment.

IV.

In the wide universe the eternal law of nature, reproduction, re-formation, continual creation, change and renewal, exist, as in the animal and vegetable kingdom, so also in the mineral. As in organic nature, so also in inorganic, bodies begin and change, bloom, ripen and fade: some earlier, others later; and if this unchangeable fiat of nature has destined to animals and plants a shorter period for their existence, it has also determined to the firm masses of the earth a longer one for their being and end: for that which we relatively call the primeval world, has had its period of commencement, was not originally such as we now know it, and is passing away.

V.

As a proof of the sudden origin of firm natural substances, we may employ the following account of the increase of diamonds, which will be succeeded by an account of the increase of iron.

VI.

"*Tavernier*, a jewel-merchant, who has intimately investigated the diamond mines in the East Indies, relates in his travels, 'That the same district from which they had carefully dug all the diamonds, after some years contained again new ones, and believes, that the precious stones remaining concealed in the earth, like seed, can beget new ones, whence it would follow, that we should be careful, not to rob entirely a district of its precious stones, but at least leave some gems for future seed:' as is done in the salt mines of Salzburg."

VII.

Many mineralogists incline to this opinion, which is confirmed by the account of an English traveller, F. Hamilton, who seems not to have known the account of Tavernier, and is therefore a more credible witness.

Hamilton visited the diamond mines of Panna, in the East Indies, in the year 1813, and says: "The workmen assured me, that the formation of diamonds is continually going on, and that they have as much hope of a rich harvest, when they examine a district which has not been dug for eleven or fifteen years, as if they had opened a new district, and I myself am a witness of the fact."

VIII.

Far more important to mankind than the continued formation of diamonds, is that of the metals, especially from its usefulness, that of the noblest or most indispensable of all, iron.

IX.

If the opinion of miners is correct, "that the quantity of iron ore existing in the bosom of the earth does not increase, and hence the incessant diminution is not repaired," to what embarrassment would we be subject by the exhaustion of iron mines? What privation, what retrogradation would occur, if iron should ever become so rare as gold is now?

X.

If the testimony of miners is to be relied upon, I can oppose to the opinion just stated, a contrary one of the miners and superintendents of Aulen, Wasseralfingen and Konigsbronn, in Wurtemberg, who assured me during my residence there in 1805, "that their mines were inexhaustible; and if they would, they could dig again, where in former times the shafts had been filled up."

They dig there in a district many miles long and broad at the foot of the mountains, thirty to forty fathoms deep, lies in blue clay and green sand, an earthy argillaceous iron stone, which is stratified like slate, and in many places contains conchilia, and yields from forty to fifty pounds per cent profit.

The loose, granular and slaty texture of this argillaceous iron stone, its containing shells and its occurrence in clay and sand, prove it to be a recent formation and not primary.

XI.

The general existence of iron distributed through the three kingdoms of nature, as a component part of bodies, speaks rather for its farther continuance, re-production and increase, than for the possibility of an entire exhaustion, and as iron as a component part of organic and inorganic bodies is ever newly formed, why should the deposites of this metal, the iron mines, alone be exhausted?

XII.

The *Aachner Zeitung* of Feb. 11, 1821, contains a letter from Schleiderthal, wherein it is stated, that "general experience in the iron mines there, at Selternich and Calle, prove that iron ore is continually forming, though not so rapidly as diamonds. The shafts sunk many years ago, which have been opened here and there, confirm this opinion. In such re-opened shafts, iron hammers have been found in the ore, from which the wooden handles had decayed and iron formed in the cavity of the hammer."

XIII.

That under favorable circumstances, this metal can also be rapidly formed, the following circumstance proves:

Prof. Meinecke has discovered, in the Dolan heath, near Halle, a remarkable new and continuous metallic formation. "In glistening tables of an inch in size, whose extent visibly increases, iron pyrites is deposited there on reeds, in a moor recently drained, which the discoverer calls *Blätterkies*." This enigmatical metallic formation is ascribed to the decomposition of plants containing iron and sulphur, and the more remarkably on this account, since every where else pyrites, when it occurs, combined in a chemical process, separates to salts. A reduction of salts to metals on the contrary in nature, beyond the laboratory of the chemist, has never been known.

XIV.

Of all the metals iron is distributed the most abundantly and generally in nature; it belongs to all the three kingdoms of nature, for it forms also a component part of warm-blooded animals and plants.

XV.

Chemical investigations of the blood of warm-blooded animals have shown that it contains iron; indeed, metallic grains have been obtained from the cruor of the same, and physiologists maintain, that this belongs peculiarly to that part of the blood; that it in combination with respirable air, forms the red color of blood; that it contributes to the creation of heat in bodies, and that the darker color of the muscles and other organs depends upon this constituent. Further, there are diseases, the proximate cause of which we ascribe to the want of iron in the blood, and for which we prescribe as remedies metallic iron, or preparations thereof.

XVI.

Iron is also found in the concretions of calculus disorders. Wurzer says he is more inclined to believe, that it is never wanting in human and other animal concretions, but because it was not suspected, and hence not sought for there, it has hitherto been overlooked.

XVII.

Iron, as a constituent part of the vegetable kingdom, was mentioned while alluding to the discovery of Professor Meinecke. I shall now speak of the oak, (*Quercus robur*,) the bark of which, besides its well known property of tanning leather, is remarkable also for its other constituents, for besides this tanning quality, it also contains iron. It has been asserted, that of all tall trees, the oak possesses the greatest conducting power of electricity, or that it especially attracts the lightning. I have formerly often had occasion, to convince myself of the truth of this last position, that lightning can shatter to slivers and uproot the largest and strongest oaks, that I assume this position as a fact. We indeed, assume, that the iron as a component part of the bark of the oak is the cause of this great attractive power. Others assert, on the contrary, that the cause of this is in the height of the oak, in the prominence of aged oaks above other trees. This last opinion, however, is overthrown by the fact, that in warm climates, the beech, linden, fir, birch, pine, poplar and the weeping willow, attain an equal height, but are far more rarely struck by lightning. (*To be continued.*)

HINTS TO NEWSPAPER WRITERS.

[Selected for the Northern Light from the writings of the late Cicero Loveridge.]

In this country, reading and writing unquestionably "come by nature." "The intelligence of the age" induces all ages, sexes and conditions to read newspapers; and the intelligence of individuals prompts almost every man, woman and child, occasionally to write for them. "The greatest good of the greatest number," a principle upon which Mr. Bentham thinks all human affairs should be predicated, would seem to require that some hints should now and then be thrown out for the benefit of those who seek to benefit community through the columns of the public press.

Contributors to newspapers may be divided into various genera and species. The first and most important division is into those who write because they have ideas, and those who write because they fancy that they have. It is sometimes difficult for an individual to determine *satisfactorily* for himself to which of those classes he really belongs. It is a safe rule in such cases, as a general one, for those who seriously entertain doubts upon the subject, to put themselves down as belonging to the *latter*. The public seldom find much difficulty in determining this point—there is always such a vast difference between the productions of those who *think*, and of those who only *remember*. The first are characterized by brevity, point, earnestness and precision; the latter by long introductions, circumlocution, epithets, involved sentences, sound.

Each of the aforesaid classes may be subdivided into those who write prose, and those who write poetry, including blank verse, rhyme, and rigmarole. A good prose writer is a being who should, whether wearing pantaloons or petticoats, every where receive the highest respect. The good prose writer is one who never writes behind a spread dictionary, or renders such an accompaniment necessary to the reader. He selects words for his meaning—not meaning for his words. When he essays to write, he thinks of the end—not of the beginning. He never labors at embellishments, like a lady at her toilet. If used at all, they are wrought in, like a rainbow in a storm, from the natural and necessary relation of one thing to another. Such writers very often send communications to newspapers; but then they never begin by requesting "a space in your highly interesting and valuable journal," or talk of "trespassing upon the patience of your numerous readers," or end with a postscript requesting the editor to "correct the spelling," or "remodel the language." They do not write to gratify their vanity, oblige an individual, or to fill out a given quantity of *matter*. They write because they have something to say—and know what it is. Such communications are always welcomed, and are always read. But there is another and more common class of individuals who write *prose*, and sometimes get it printed in the papers. A young gentleman or young lady—it is frequently difficult to tell which—imagines that he or she has something to express upon the moral, social, political, or philosophical affairs of the world, which it would be very instructive for the public to understand. Pen, ink and paper are instantly

summoned, and after long and mature deliberation as to the propriety of commencing with "I," "We" or "Dear Reader," the first sentence is finally worked off. "Nothing so difficult as a beginning," says the writer. Very true, indeed, when one does not know what is to be begun.

The start thus fortunately achieved, the work progresses prodigiously. Remembered phrases, "ancient saws and modern instances," threadbare quotations, trite reflections, and commonplace conclusions are woven into three or four pages of foolscap, and sent off to the printer. He, good easy man, reads it all over patiently, to see that it contains nothing absolutely wrong, rather than expecting to find any thing in it particularly right; and not knowing but it may come from some kind friend or patron, puts it in his paper. A neighboring printer, being pressed for matter, glances at the article, and finding it sufficiently general, relies on the good sense of his brother publisher, and copies the wonderful production; and so it goes the rounds, very much to the edification of all concerned.

But what shall be said of the newspaper poets?—we mean those who commence each line with a capital letter. Can any advice be of service to them? Can they be persuaded to cease their soulless stanzas? Or has long continued custom established beyond the hope of remedy, that about half a column of every paper must be devoted to a *Muse*, that hath neither eyes, ears, imagination, feeling, passion, poetry, or common sense—a poor, spiritless, lackadaisical deity, decked out in faded wreaths and tinsel ornaments, with a foolscap on her head, and half a dozen fools at her feet? Poetry is poetry—but by all that is bright, beautiful and burning in the heavens above or the earth beneath,—in sound, soul, or sense, let a stop be put to this sing-song mongering for the press. The only *original* rhyme that should be published hereafter, is that contained in advertisements, unless by special agreement.

The observance of the following practical rules would be of infinite benefit to writers:

1. Select a subject, in which the public at large, or at least a considerable class, may be presumed to have some interest.

2. Never mind propounding the motives or inducements you have to enter upon the discussion, or who you are, or where you live.

3. Be sure to be accurate in your statement of facts, and endeavor to preserve some little connection between your premises and conclusion.

4. Never refer to an individual by the initials of his name, or stars, or dashes. Write his name at length, or not at all.

5. When you find that you have exhausted all your own ideas and patience, philanthropy does not require you to go on merely for the reader's sake.

[For the Northern Light.]

ENGRAVING ON WOOD.

The excellence to which this branch of the arts has been carried within the last forty years, has been so great and so rapid as to strike the attention of the most inobservant. The embellishments of works of the first class, on which vast sums were heretofore expended, in order that they should be executed on copper or steel, are now engraved on wood; and so complete is the fidelity with which the various designs are produced, that in many cases the eye can with difficulty distinguish any difference in the plates.

The art of cutting on wood was discovered, or, if it was known to the ancients, was reproduced about the thirteenth or fourteenth centuries. Several pieces are extant dating as far back as 1423.

The greatest name in the early annals of this art, is that of DURER, who introduced light and shade into his pieces with more success than any artist before him. His works were the study of a number of great men in the school of painting. The best of all his pieces are those which embellish the life of the virgin. This celebrated man died in 1528, and with him the art of engraving on wood fell into a state of utter decay.

In the commencement of the eighteenth century, it was revived in England, by Jackson, the rival of Papillon, the great French engraver of that epoch. Jackson first introduced the present mode of cutting, by pushing the graver from the operator, instead of drawing towards him the tool, which was a kind of knife. He cut on the *end* of the wood instead of on the *side*, which was the practice before his time. But Jackson's successor arrived at a degree of perfection hitherto unknown, and carried his art to a point which has, in many instances, been never exceeded.

Thomas Bewick was born in England in 1753. He served his time originally to a copperplate engraver, but had his attention directed to engraving on wood before his apprenticeship had terminated.

He established himself in London in 1776, but he became soon sick of his residence there. He said he would rather be herding sheep in the country than remain in London, though he should be made Prime Minister of England by consenting to live there, and with this conviction he left the metropolis and returned to Newcastle in 1777, when he entered into partnership with his former master. His superior talent, says a writer in a contemporary paper, was first remarked in the naturalness with which he brought out his foliage, and in the representation of his animals, in which he has scarce ever been equalled. His works, especially his History of Quadrupeds, (1790,) met with a rapid sale, and was followed by an Illustrated History of British Birds, the first vol. of which was published in 1797.

"Bewick's style of engraving," says one of the best English engravers, "as displayed in the birds, is exclusively his own. He adopts no conventional mode of representing texture, or producing effect, but skilfully avails himself of the most simple and effective means which his art affords of faithfully and efficiently representing his subject. He never wastes his time in laborious trifling, to display his skill in execution; he works with a higher aim—to represent nature, and consequently he never bestows his pains except to express a meaning. The manner in which he has represented the feathers in many of his birds, is admirable, as it is perfectly original. His feeling for his subject, and his knowledge of his art, suggests the best means of effecting his end, and the manner in which he has employed them, entitle him to rank as a wood engraver, without reference to his merits as a designer, among the very best that have practised the art." Bewick died in 1828. He was celebrated throughout Europe as one of the first men of genius of the age. He left many pupils, some of whom command a high rank in their profession.

Dr. Alexander Anderson, of New-York, is justly styled the father of wood engraving in our country, and the Bewick of America. He originally studied medicine, but having succeeded in some attempts on wood, he abandoned his first profession, and became an engraver. The difficulties he experienced through want of proper tools, and adequate instruction, would have broken down the zeal of any but an enthusiast like him. Perseverance, however, overcame all "impossibles," and now in his old days, he has the satisfaction of seeing wood engraving take a high, and a deserved rank among the sister arts.

There is an essential difference, perhaps many are unaware, between this and engraving on copper or steel. In these, the artist produces his dark lines by cutting into his plate. In wood engraving, the artist, on the contrary, produces his dark lines by leaving unremoved from his block, or, as we should say, leaving "raised," those lines which he desires to remain impressed on his plate.

To expedite this work, and to render the design more perfect, the proposed design is traced on the block. Every black line which the engraver is to exhibit is left untouched, and all the intermediate spaces are cut away. The impression from the block is then taken in the same manner as from type.

It was not, however, our intention, when we began this article, to write either a history of engraving on wood, or to describe the difficulties to be surmounted before acquiring that delicacy of tact in designing and tracing figures, so necessary to the finished artist. We designed rather to direct the attention of the reader to the subject generally, especially since an opportunity is afforded to every one in this city desirous of judging for himself, to examine the details and minutiæ of the art, by a visit to the studio of Mr. N. ORR, in the Exchange Buildings.

Mr. N. ORR is well and favorably known to most of our citizens, and to the lovers of the fine arts in this section of our Union. He is a young gentleman of much ardour in his profession, and modesty in his demeanor. He is engaged at present, in engraving a series of small, but exquisitely designed cuts for the Pictorial or Illustrated Bible, and an examination of some of these alone, would well repay a call on this young and respected artist.

Literary Notices.

NEW PUBLICATIONS.

Mr. E. H. PEASE, Bookseller of this city, has laid on our table the following new works:

THE SELF TAUGHT PENMAN, or a Treatise on the art of Writing; containing Pictorial Illustrations, and eight copperplate engravings; with explanations, directions and questions; designed for the use of families and schools, by Halsey H. Baker, Professor of Penmanship, and Rensselaer Bentley, author of the Pictorial Series of School Books.

AMERICAN EXPOSITOR, or Intellectual Definer, designed for the use of schools. By R. Claggett, A. M., late Principal of Central High School, Providence.

The fact that this little work has reached a sixth edition, affords indisputable evidence of its intrinsic value, as an elementary class book.

TREATISE ON ARITHMETIC, for Common Schools and Academies; improved (4th) edition. By W. D. Beattie, A. M. late President of Cambridge Washington Academy.

THE VOCAL GUIDE: a first book for schools and classes in vocal music: containing a systematic arrangement of the elements of the art, adapted to the modern mode of teaching by the aid of the black board; with directions, illustrations and remarks on the application of the rules, the attunement of the voice and practice of singing: together with a series of progressive vocal exercises in melody, rythm and harmony, suitable for both adult and juvenile learners. Also chaste and flowing music from eminent masters, with several original pieces, arranged in two, three and four parts, with hymns and songs, rural, social, moral, sentimental and devotional. Designed for the use of select, common and Sabbath schools, academies, &c., &c. By William J. Edson. Fourth edition.

The REVISED STATUTES of the State of New-York, reduced to questions and answers, for the use of schools and families. By William B. Wedgewood, A. M., member of the New-York Bar.

THE WRITINGS OF JANE TAYLOR, in three volumes: *New-York*, Saxton & Miles.

We find ourselves unable to do full justice to the merits of this admirable work, within the limited compass of that portion of our columns devoted to notices of new publications. As a means of intellectual and moral culture, especially for the young of both sexes, we regard it as unsurpassed by any of the numerous publications designed for this purpose. It comprises the memoirs and correspondence of Miss Taylor; her poetical remains; her essays in prose and poetry; several religious and didactic pieces of a high order of excellence, and a variety of moral and interesting tales. To those who, for nearly half a century, have been familiar with the efforts of her gifted pen, no commendation of the present work is necessary: but to those who have not, we earnestly recommend its perusal, and its purchase as a valuable addition to their library. A great portion of it is expressly and admirably adapted to the minds of children: and is eminently calculated to promote their intellectual and moral advancement.

THE YOUNG MECHANIC. By the author of the 'Young Merchant:' *New-York*, Saxton & Miles.

This little work, we are happy to perceive, has already reached its second edition: and in our judgment, its popularity is well deserved. It is full of instruction and encouragement to that numerous and rapidly increasing class of our population, who are embarked or are preparing to embark in the various mechanical trades; and to the laboring classes as a body. The present edition is very neatly executed, and will, we trust, find a place in all our public and private libraries.

☞ The LOWELL OFFERING, for the month of September, just received, contains the unwelcome annunciation, by the gifted and accomplished editor, Miss HARRIET FARLEY, of the discontinuance of this valuable periodical, chiefly, as we understand from her valedictory, for want of support. This is by no means creditable to our Eastern brethren. No more interesting or ably conducted periodical has graced our exchange list—especially when we consider that its conductors have been exclusively Factory Girls. We part with it, with unfeigned regret.

☞ We take pleasure in announcing that SAMUEL S. RANDALL, Esq. is added to our list of conductors. He is widely known and appreciated as a correct thinker, and a fine, vigorous writer. His graceful and fluent pen has often been conspicuous in our columns; he will now become a regular contributor.

AGENTS.

Lenox, Mass.—John G. Stanley.
Watertown, N. Y.—Pliny Miles.
Aurora, N. Y.—Rev. John Walker.
New-York City—Israel Post, 88 Bowery.
Dayton & Newman, cor. Ann and Nassau
Utica—Isaiah Tiffany, Genesee-street.
Buffalo—W. B. & C. E. Peck.
Oswego—E. W. Clarke.

TRAVELLING AGENTS.

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